XR-F5100EE

SERVICE MANUAL

East European Model

Ver 1.0 2004.04

Model Name Using Similar Mechanism	XR-CA665EE
Tape Transport Mechanism Type	MG-25L-136

SPECIFICATIONS

Cassette Player section

Tape track	4-track 2-channel stereo
Wow and flutter	0.08 % (WRMS)
Frequency response	30 – 18,000 Hz
Signal-to-noise ratio	

Cassette type	
TYPE II, IV	61 dB
TYPE I	58 dB

Tuner section

FM

Tuning range	FM1/FM2: 87.5 – 108 MHz (at 50 kHz step) FM3: 65 – 74 MHz (at 30 kHz step)
Aerial terminal	External aerial connector
Intermediate frequency	10.7 MHz/450 kHz
Usable sensitivity	9 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	67 dB (stereo), 69 dB (mono)
Harmonic distortion at 1 kHz	
	0.5 % (stereo), 0.3 % (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz

AM

Tuning range	531 – 1,602 kHz
Aerial terminal	External aerial connector
Intermediate frequency	10.7 MHz/450 kHz
Sensitivity	30 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	52 W × 4 (at 4 ohms)

General

Outputs	Audio output terminals (rear/sub switchable) Power aerial relay control terminal Power amplifier control terminal
Inputs	Telephone ATT control terminal Remote controller input terminal BUS control input terminal BUS audio input terminal Aerial input terminal
Tone controls	Low: ±10 dB at 60 Hz (XPLOD) Mid: ±10 dB at 1 kHz (XPLOD) High: ±10 dB at 10 kHz (XPLOD)
Power requirements	12 V DC car battery (negative earth)
Dimensions	Approx. 178 × 50 × 177 mm (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 161 mm (w/h/d)
Mass	Approx. 1.2 kg
Supplied accessories	Card remote commander RM-X115 Parts for installation and connections (1 set) Front panel case (1)

Note

This unit cannot be connected to a digital preamplifier or an equalizer which is Sony BUS system compatible.

Design and specifications are subject to change without notice.

FM/AM CASSETTE CAR STEREO

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e Vehicle Company
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Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

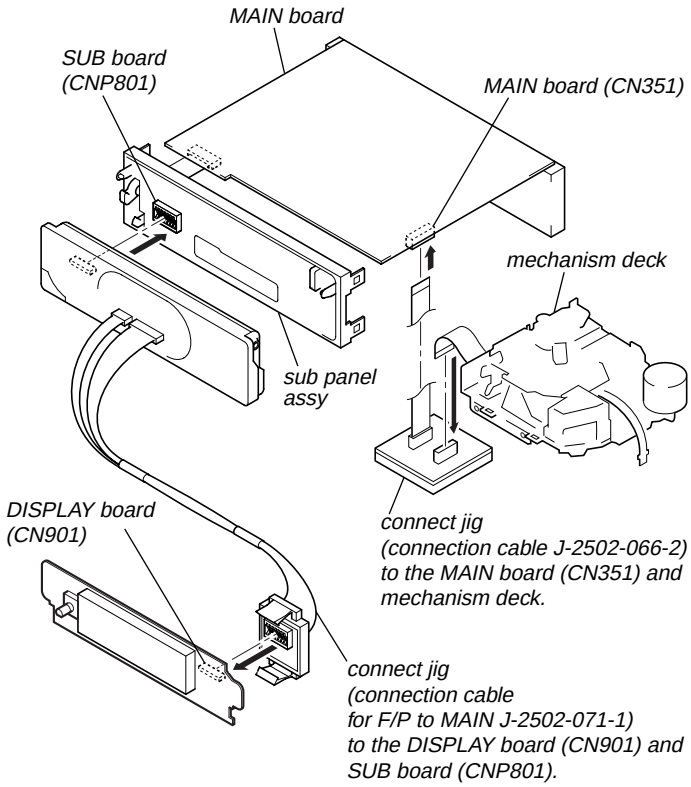
Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SERVICING NOTES

SERVICE POSITION

In checking the display board and main board, prepare two jigs (connection cable J-2502-066-2 and
connection cable for F/P to main J-2502-071-1).


MAIN board
SUB board (CNP801)
MAIN board (CN351)
mechanism deck
sub panel assy
DISPLAY board (CN901)
connect jig (connection cable J-2502-066-2) to the MAIN board (CN351) and mechanism deck.
connect jig (connection cable for F/P to MAIN J-2502-071-1) to the DISPLAY board (CN901) and SUB board (CNP801).

UNLEADED SOLDER

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size)

: LEAD FREE MARK

Unleaded solder has the following characteristics.

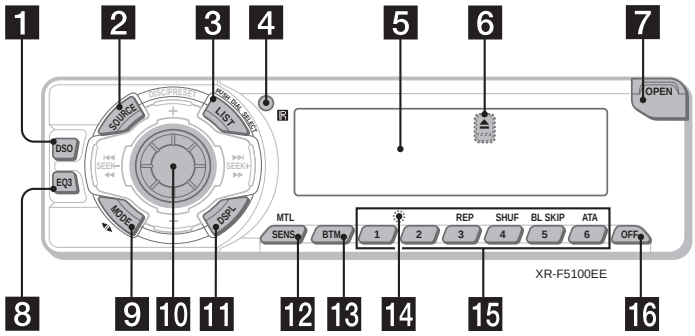
- Unleaded solder melts at a temperature about 40 ˚C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350 ˚C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscou-s (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

SECTION 1
GENERAL

This section is extracted from instruction manual.

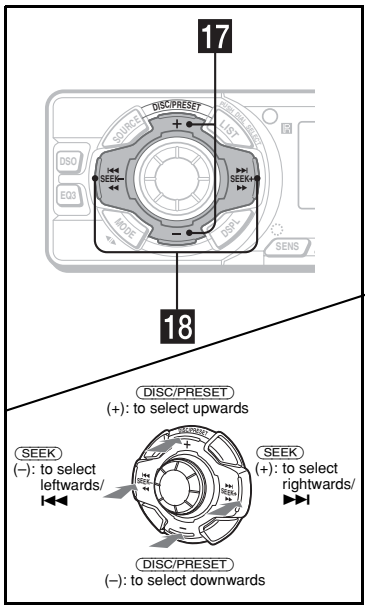
Location of controls

Refer to the pages listed for details.



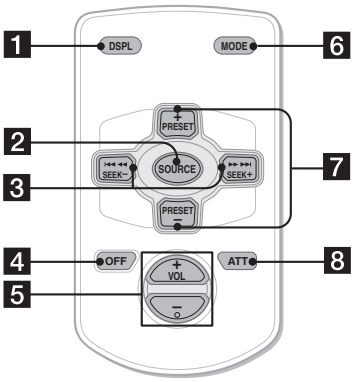
1 DSO button
2 SOURCE (Power on/Radio/Tape/CD/MD) button
To select the source.
3 LIST button
4 Receptor for the card remote commander
5 Display window
6 ⏏ (eject) button (located on the front side of the unit, behind the front panel)
7 OPEN button
8 EQ3 button
9 MODE (◄I►) button
To change operation.
10 Volume control dial/Select button
Rotate to:
– Adjust the volume.
– Adjust settings.
Press to:
– Select items.
11 DSPL (display mode change) button
12 SENS/MTL button
13 BTM button
14 RESET button (located on the front side of the unit, behind the front panel)
15 Number buttons
Tape:
③**: REP**
⑤**: BL SKIP**
⑥**: ATA**
Radio:
To store stations/receive stored stations.
CD/MD:
③**: REP**
④**: SHUF**
16 OFF (Stop/Power off) button*

* **Warning when installing in a car without an ACC (accessory) position on the ignition switch**
After turning off the ignition, be sure to press and hold (OFF) on the unit until the display disappears.
Otherwise, the display does not turn off and this causes battery drain.



17 DISC (ALBUM)/PRESET buttons (+/–)
To receive preset stations/change the disc*1, skip albums*2.
*1 *When an optional CD/MD unit is connected.*
*2 *Available only when an optional CD unit with the MP3 file control function is connected, and MP3 file is played.*
18 SEEK buttons (–/+)
To skip tracks/fast-forward, reverse a track/tune in stations automatically, find a station manually/select a setting.

Card remote commander RM-X115

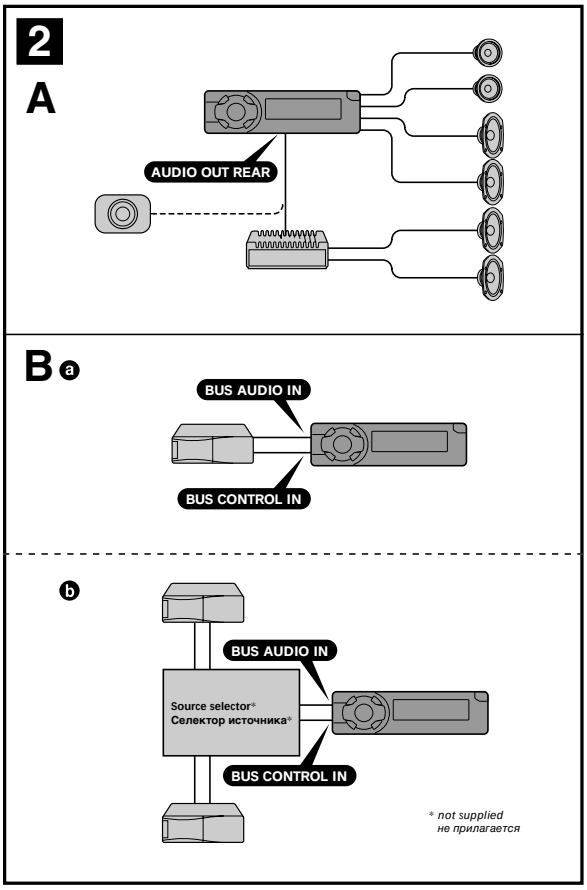


The corresponding buttons of the card remote commander control the same functions as those on this unit.

1 DSPL button
2 SOURCE button
3 SEEK (–/+) buttons
4 OFF button
5 VOL (+/–) buttons
6 MODE button
7 PRESET (DISC/ALBUM) (+/–) buttons
8 ATT button

Note
If the display disappears by pressing (OFF), it cannot be operated with the card remote commander unless (SOURCE) on the unit is pressed, or a cassette tape is inserted to activate the unit first.

Tip
For details on how to replace the battery, see "Replacing the lithium battery" on page 22.



Cautions

- This unit is designed for negative earth 12 V DC operation only.
- Do not get the leads under a screw, or caught in moving parts (e.g. seat railing).
- Before making connections, turn the car ignition off to avoid short circuits.
- Connect the power connecting lead ⑦ to the unit and speakers before connecting it to the auxiliary power connector.
- **Run all earth leads to a common earth point.**
- Be sure to insulate any loose unconnected leads with electrical tape for safety.

Notes on the power supply lead (yellow)

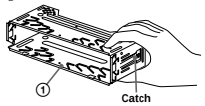
- When connecting this unit in combination with other stereo components, the connected car circuit's rating must be higher than the sum of each component's fuse.
- When no car circuits are rated high enough, connect the unit directly to the battery.

Parts list (1)

- The numbers in the list are keyed to those in the instructions.
- The bracket ① and the protection collar ④ are attached to the unit before shipping. Before mounting the unit, use the release keys ⑥ to remove the bracket ① and the protection collar ④ from the unit. For details, see "Removing the protection collar and the bracket (4)" on the reverse side of the sheet.
- **Keep the release keys ⑥ for future use as they are also necessary if you remove the unit from your car.**

Caution

Handle the bracket ① carefully to avoid injuring your fingers.



Note

Before installing, make sure that the catches on both sides of the bracket ① are bent inwards 2 mm. If the catches are straight or bent outwards, the unit will not be installed securely and may spring out.

Connection example (2)

Notes (2-A)

- *Be sure to connect the earth lead before connecting the amplifier.*
- *If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.*

Tip (2-B- b)

For connecting two or more CD/MD changers, the source selector XA-C30 (optional) is necessary.

Connection diagram (3)

A To AMP REMOTE IN of an optional power amplifier

This connection is only for amplifiers. Connecting any other system may damage the unit.

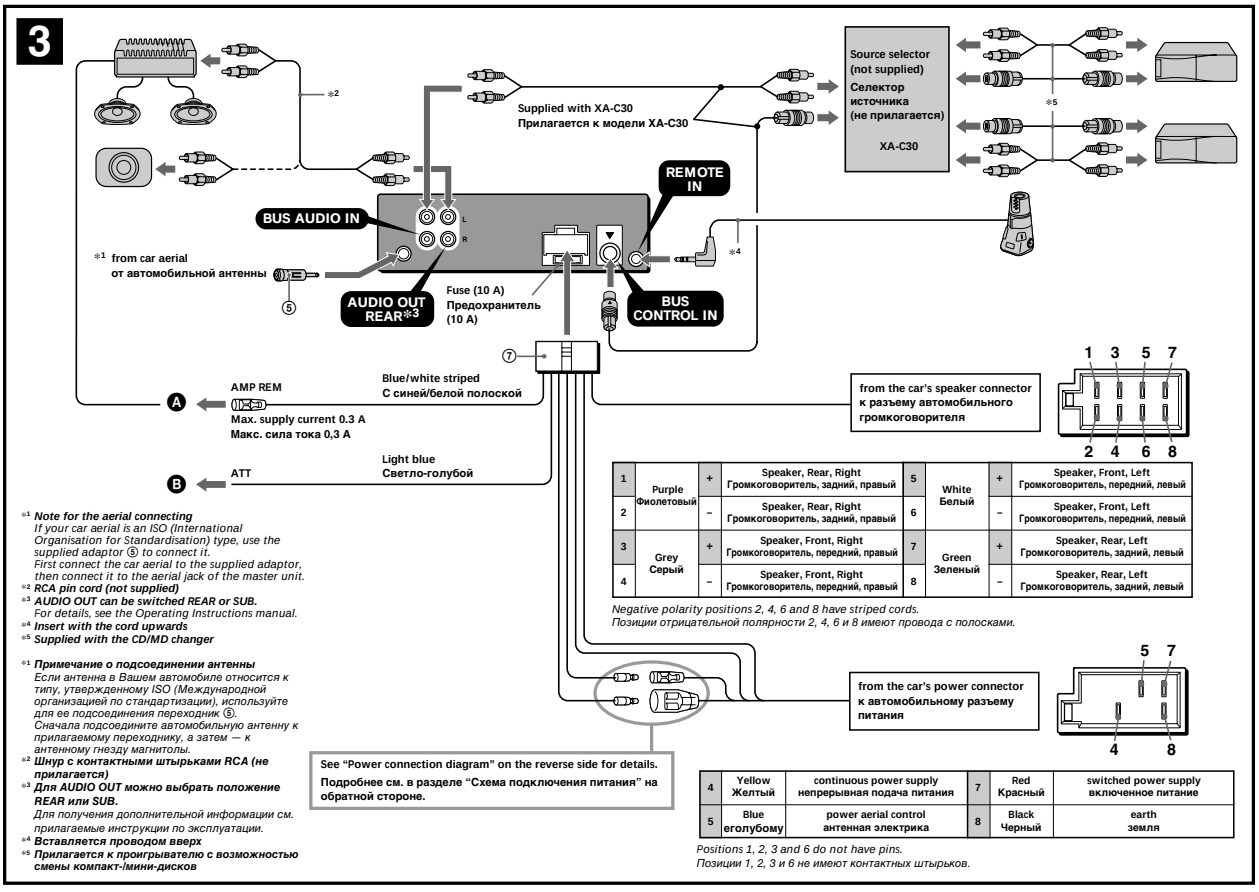
B To the interface cable of a car telephone

Warning

If you have a power aerial without a relay box, connecting this unit with the supplied power connecting lead ⑦ may damage the aerial.

Notes on the control leads

- *The power aerial control lead (blue) supplies +12 V DC when you turn on the tuner .*
- *When your car has built-in FM/AM aerial in the rear/side glass, connect the power aerial control lead (blue) or the accessory power input lead (red) to the power terminal of the existing aerial booster. For details, consult your dealer.*
- *A power aerial without a relay box cannot be used with this unit.*


3
Source selector (not supplied)
Селектор источника (не прилагается)
XA-C30
Supplied with XA-C30
Прилагается к модели XA-C30
REMOTE IN
BUS AUDIO IN
AUDIO OUT REAR※3
Fuse (10 A)
Предохранитель (10 A)
BUS CONTROL IN
※1 from car aerial
от автомобильной антенны
AMP REM
Blue/white striped
С синей/белой полоской
Max. supply current 0.3 A
Макс. сила тока 0,3 A
ATT
Light blue
Светло-голубой
from the car's speaker connector
к разъему автомобильного громкоговорителя
1 3 5 7
2 4 6 8
1 Purple Фиолетовый + Speaker, Rear, Right Громкоговоритель, задний, правый
2 – Speaker, Rear, Right Громкоговоритель, задний, правый
3 Grey Серый + Speaker, Front, Right Громкоговоритель, передний, правый
4 – Speaker, Front, Right Громкоговоритель, передний, правый
5 White Белый + Speaker, Front, Left Громкоговоритель, передний, левый
6 – Speaker, Front, Left Громкоговоритель, передний, левый
7 Green Зеленый + Speaker, Rear, Left Громкоговоритель, задний, левый
8 – Speaker, Rear, Left Громкоговоритель, задний, левый
Negative polarity positions 2, 4, 6 and 8 have striped cords.
Позиции отрицательной полярности 2, 4, 6 и 8 имеют провода с полосками.
from the car's power connector
к автомобильному разъему питания
5 7
4 8
See "Power connection diagram" on the reverse side for details.
Подробнее см. в разделе "Схема подключения питания" на обратной стороне.
4 Yellow Желтый continuous power supply непрерывная подача питания
5 Blue голубому power aerial control антенная электрика
7 Red Красный switched power supply включенное питание
8 Black Черный earth земля
Positions 1, 2, 3 and 6 do not have pins.
Позиции 1, 2, 3 и 6 не имеют контактных штырьков.

※1 ***Note for the aerial connecting***
If your car aerial is an ISO (International Organisation for Standardisation) type, use the supplied adaptor ⑤ to connect it.
First connect the car aerial to the supplied adaptor, then connect it to the aerial jack of the master unit.
※2 ***RCA pin cord (not supplied)***
※3 ***AUDIO OUT can be switched REAR or SUB.***
For details, see the Operating Instructions manual.
※4 ***Insert with the cord upwards***
※5 ***Supplied with the CD/MD changer***

※1 ***Примечание о подсоединении антенны***
Если антенна в Вашем автомобиле относится к типу, утвержденному ISO (Международной организацией по стандартизации), используйте для ее подсоединения переходник ⑤.
Сначала подсоедините автомобильную антенну к прилагаемому переходнику, а затем — к антенному гнезду магнитолы.
※2 ***Шнур с контактными штырьками RCA (не прилагается)***
※3 ***Для AUDIO OUT можно выбрать положение REAR или SUB.***
Для получения дополнительной информации см. прилагаемые инструкции по эксплуатации.
※4 ***Вставляется проводом вверх***
※5 ***Прилагается к проигрывателю с возможностью смены компакт-/мини-дисков***

Memory hold connection
When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition switch is turned off.

Notes on speaker connection
- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities to avoid its damage.*
- *Do not connect the speaker terminals to the car chassis, or connect the terminals of the right speakers with those of the left speaker.*
- *Do not connect the earth lead of this unit to the negative (–) terminal of the speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Connect only passive speakers. Connecting active speakers (with built-in amplifiers) to the speaker terminals may damage the unit.*
- *To avoid a malfunction, do not use the built-in speaker leads installed in your car if the unit shares a common negative (–) lead for the right and left speakers.*
- *Do not connect the unit's speaker leads to each other.*

Note on connection
If speaker and amplifier are not connected correctly, "FAILURE" appears in the display. In this case, make sure the speaker and amplifier are connected correctly.

Предостережения

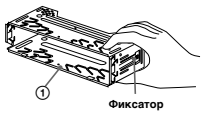
- Данная автомагнитола предназначена для подключения только к 12-вольтному аккумулятору постоянного тока с отрицательным заземлением.
- Не допускайте попадания проводов под винты или между подвижными деталями (например, между направляющими сидений).
- Перед выполнением соединения выключите зажигание автомобиля во избежание короткого замыкания.
- Сначала подсоедините шнур питания ⑦ к магнитоле и громкоговорителям, а уже потом – к разъему внешнего источника питания.
- **Подведите все провода заземления к одной и той же точке заземления.**
- В целях безопасности обязательно изолируйте все свободные неподсоединенные провода изоляционной лентой.

Примечания относительно шнура питания (желтого)
- При подключении данного устройства вместе с другими стереокомпонентами номинальное значение силы тока в контуре питания автомобиля должно превышать суммарное значение силы тока, указанное на предохранителях всех компонентов.
- Если номинальное значение силы тока в контуре питания автомобиля не достаточно высокое, подсоедините устройство напрямую к аккумулятору.

Перечень деталей (1)

- Цифры в списке соответствуют цифрам, упоминаемым далее в данной инструкции.
- При поставке кронштейн ① и защитная манжета ④ прикрепляются к устройству. Перед монтажом снимите кронштейн ① и защитную манжету ④ с устройства с помощью ключей для демонтажа ⑥. Подробную информацию см. в разделе "Снятие защитной манжеты и кронштейна (4)" на обратной стороне листа.
- **Сохраните ключи для демонтажа ⑥ для использования в будущем, так как они также потребуются при демонтаже устройства из машины.**

Внимание
Обращайтесь с кронштейном ① осторожно, чтобы не повредить пальцы.



Примечание
Перед установкой убедитесь, что фиксаторы по обеим сторонам кронштейна ① загнуты внутрь на 2 мм. Если фиксаторы находятся в прямом положении или выгнуты наружу, устройство не будет надежно установлено и может выпасть.

Пример подсоединения (2)

Примечания (2-A)
- *Прежде чем подключать усилитель, обязательно подсоедините провод заземления.*
- *Если подключается дополнительный усилитель мощности, а встроенный усилитель не используется, звуковой сигнал будет отключен.*

Совет (2-B- b)
При подсоединении двух или более проигрывателей с возможностью смены компакт-/мини-дисков потребуется селектор источника XA-C30 (не прилагается).

Схема подсоединения (3)

A Подключение к входу AMP REMOTE IN дополнительного усилителя мощности
Этот вариант подключения используется только для усилителей. Подключение любой другой системы может привести к повреждению устройства.

B К интерфейсному кабелю автомобильного телефона

Предостережение
Если Вы используете антенну с электрическим приводом без релейного блока, подсоединение данной магнитолы посредством прилагаемого шнура питания ⑦ может привести к повреждению антенны.

О проводах управления
- *При включении тюнера по проводу питания приемной антенны (синему) подается напряжение +12 В постоянного тока.*
- *Если на заднем/боковом стекле автомобиля установлена встроенная антенна диапазона FM/AM, подсоедините провод питания приемной антенны (голубой) или провод питания устройства (красный) к клемме питания существующего усилителя антенны. Чтобы получить дополнительные сведения, обратитесь к своему дилеру.*
- *Антенна с электрическим приводом, не снабженная релейным блоком, с данной магнитолой использоваться не может.*

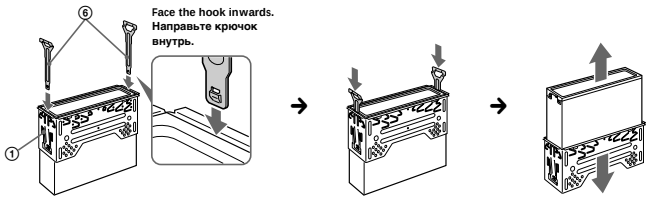
Подсоединение для поддержки памяти
Когда к магнитоле подсоединен желтый электрический провод, блок памяти будет постоянно получать питание, даже при выключенном зажигании.

О подсоединении громкоговорителей
- *Прежде чем подсоединять громкоговорители, выключите магнитолу.*
- *Используйте громкоговорители с полным сопротивлением 4 - 8 Ом, обладающие способностью принимать достаточно мощный сигнал. В противном случае они могут быть повреждены.*
- *Не подсоединяйте контактные гнезда громкоговорителей к шасси автомобиля и не соединяйте гнезда правого громкоговорителя с гнездами левого.*
- *Не подключайте провод заземления этого аппарата к отрицательному (–) контакту громкоговорителя.*
- *Не пытайтесь подсоединить громкоговорители параллельно.*
- *Не подсоединяйте к гнездам для громкоговорителей на магнитоле какие бы то ни было активные громкоговорители (со встроенными усилителями), поскольку это может привести к повреждению последних. Убедитесь в том, что подсоединяемые громкоговорители относятся к пассивному типу.*
- *Во избежание неправильной работы устройства не используйте встроенные в автомобиль провода громкоговорителей, если устройство использует общий отрицательный провод (–) для правого и левого громкоговорителей.*
- *Не замыкайте провода громкоговорителей устройства.*

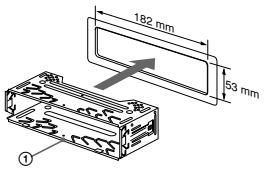
Примечание относительно подсоединения
Если громкоговоритель и усилитель подсоединены неправильно, на дисплее отобразится надпись "FAILURE". В этом случае проверьте правильность подсоединения громкоговорителя и усилителя.

4 1

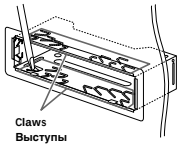
2



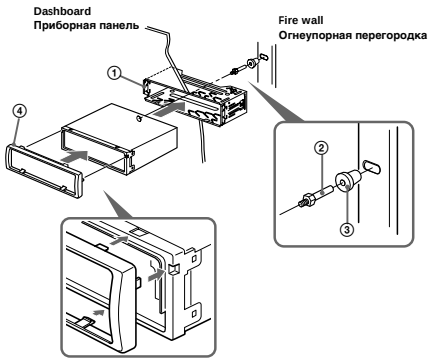
5 1



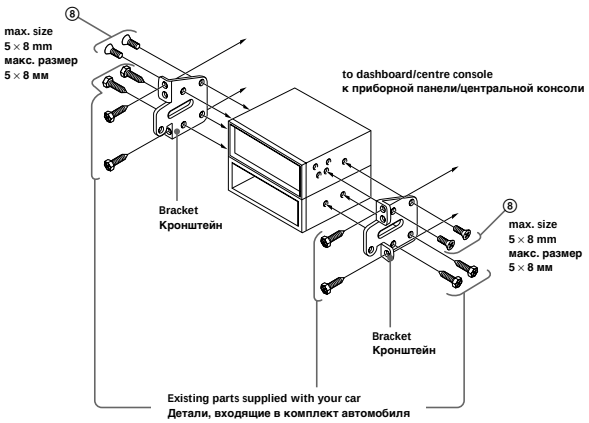
2



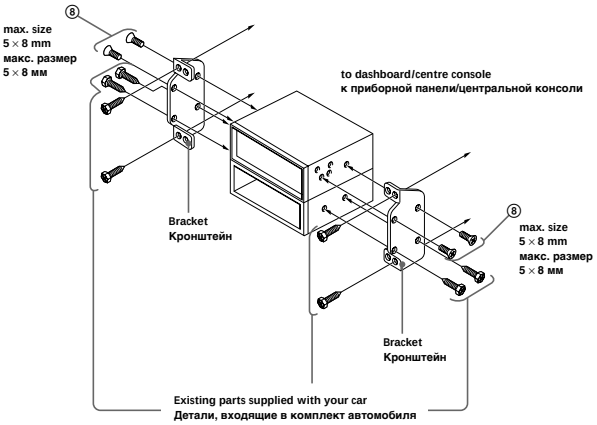
3



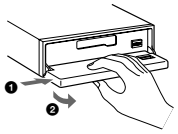
6 A TOYOTA



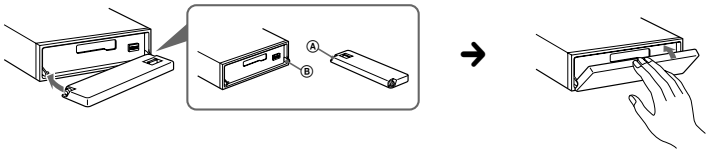
B NISSAN



7 A



B



Precautions

- Choose the installation location carefully so that the unit will not interfere with normal driving operations.
- Avoid installing the unit in areas subject to dust, dirt, excessive vibration, or high temperatures, such as in direct sunlight or near heater ducts.
- Use only the supplied mounting hardware for a safe and secure installation.

Mounting angle adjustment
Adjust the mounting angle to less than 20°.

Removing the protection collar and the bracket (4)

Before installing the unit, remove the protection collar ④ and the bracket ① from the unit.

1 Remove the protection collar ④.
❶ Engage the release keys ⑥ together with the protection collar ④.
❷ Pull out the release keys ⑥ to remove the protection collar ④.

2 Remove the bracket ①.
❶ Insert both release keys ⑥ together between the unit and the bracket ① until they click.
❷ Pull down the bracket ①, then pull up the unit to separate.

Mounting example (5)

Installation in the dashboard

Notes
- *Bend these claws outward for a tight fit, if necessary (5-2).*
- *Make sure that the 4 catches on the protection collar ④ are properly engaged in the slots of the unit (5-3).*

Mounting the unit in a Japanese car (6)

You may not be able to install this unit in some makes of Japanese cars. In such a case, consult your Sony dealer.

Note
To prevent malfunction, install only with the supplied screws ⑧.

How to detach and attach the front panel (7)

Before installing the unit, detach the front panel.

7-A To detach
Before detaching the front panel, be sure to press (OFF). Press (OPEN), then slide the front panel to the right side, and pull out the left side.

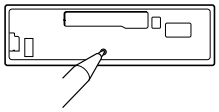
7-B To attach
Place the hole Ⓐ in the front panel onto the spindle Ⓑ on the unit as illustrated, then push the left side in.

Warning when installing in a car without ACC (accessory) position on the ignition key switch

After turning off the ignition, be sure to press and hold (OFF) on the unit until the display disappears.
Otherwise, the display does not turn off and this causes battery drain.

RESET button

When the installation and connections are completed, be sure to press the RESET button with a ballpoint pen, etc., after detaching the front panel.



Меры предосторожности

- Место для установки магнитолы выбирайте тщательно, чтобы она не мешала нормальному управлению автомобилем.
- Не устанавливайте магнитолу там, где она будет подвержена воздействию пыли, грязи, чрезмерной вибрации или высоких температур, например в местах, попадающих под прямые солнечные лучи или находящихся вблизи вентиляционных решеток обогревателей.
- В целях обеспечения надежной и безопасной установки используйте лишь входящие в комплект монтажные детали.

Допустимый угол установки
Установите магнитолу под углом не более 20°.

Снятие защитной манжеты и кронштейна (4)

Перед установкой устройства снимите защитную манжету ④ и кронштейн ① с устройства.

1 Снятие защитной манжеты ④.
❶ Для снятия защитной манжеты ④ используйте ключи для демонтажа ⑥.
❷ Потяните на себя ключи для демонтажа ⑥, чтобы снять защитную манжету ④.

2 Снятие кронштейна ①.
❶ Вставьте одновременно до щелчка оба ключа для демонтажа ⑥ между устройством и кронштейном ①.
❷ Потяните кронштейн ① вниз, а устройство - вверх, чтобы отделить одно от другого.

Пример установки (5)

Установка магнитолы в приборной панели

Примечания
- *При необходимости отогните эти выступы наружу, чтобы обеспечить плотную подгонку (5-2).*
- *Убедитесь, что 4 фиксатора, имеющиеся на защитной манжете ④, надежно вставлены в отверстия на устройстве (5-3).*

Установка аппарата в автомобиле японского производства (6)

В некоторых автомобилях японского производства этот аппарат установить невозможно. В этом случае обратитесь к своему дилеру Sony.

Примечание
Для предотвращения неправильной работы установка должна выполняться только с использованием прилагаемых винтов ⑧.

Порядок снятия и установки передней панели (7)

Перед установкой магнитолы снимите с нее переднюю панель.

7-A Снятие панели
Перед снятием передней панели обязательно нажмите кнопку (OFF). Нажмите кнопку (OPEN), сдвиньте переднюю панель вправо и потяните ее за левый край.

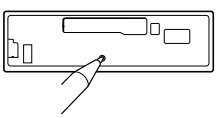
7-B Установка панели
Наложите отверстие Ⓐ на передней панели на штырек Ⓑ на аппарате, как показано на рисунке, а затем установите левую сторону на место, нажав на нее.

Предостережение относительно аппаратуры, установленной в автомобиле, в замке зажигания которого нет отдельного положения (ACC) для отключения подсоединенной аппаратуры.

После выключения зажигания обязательно нажмите кнопку (OFF) на аппарате и удерживайте ее нажатой, пока не погаснет дисплей.
Если этого не сделать, дисплей не отключится, что может привести к разрядке аккумулятора.

Кнопка RESET

Когда установка и подсоединения будут закончены, обязательно нажмите кнопку RESET с помощью шариковой ручки и т.п., предварительно сняв переднюю панель.



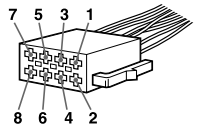
Power connection diagram

Auxiliary power connector may vary depending on the car. Check your car's auxiliary power connector diagram to make sure the connections match correctly. There are three basic types (illustrated below). You may need to switch the positions of the red and yellow leads in the car stereo's power connecting cord.
After matching the connections and switched power supply leads correctly, connect the unit to the car's power supply. If you have any questions and problems connecting your unit that are not covered in this manual, please consult the car dealer.

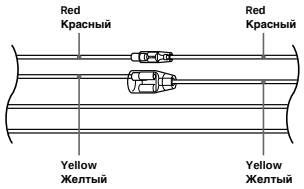
Схема подключения питания

В разных автомобилях могут использоваться разные разъемы вспомогательного питания. Чтобы убедиться в правильности подсоединения, обратитесь к схеме разъема для подключения вспомогательного питания Вашего автомобиля. Есть три основных типа (как показано на рисунке ниже). Возможно, Вам придется поменять местами подключение красного и желтого проводов в соединительном кабеле питания стереосистемы.
После проверки правильности подключения в разъемах подключите магнитолу к электропитанию автомобиля. Если у Вас есть какие-либо вопросы или проблемы, связанные с подключением магнитолы, которые не рассматриваются в настоящем руководстве, обратитесь за советом к дилеру автомобильной фирмы.

Auxiliary power connector
Вспомогательный разъем питания

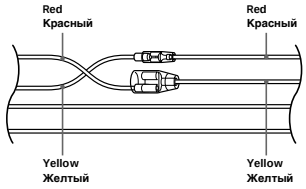


a



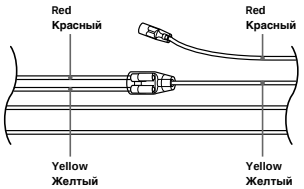
4	Yellow / Желтый	continuous power supply / непрерывная подача питания	7	Red / Красный	switched power supply / включенное питание

b



4	Yellow / Желтый	switched power supply / включенное питание	7	Red / Красный	continuous power supply / непрерывная подача питания

c

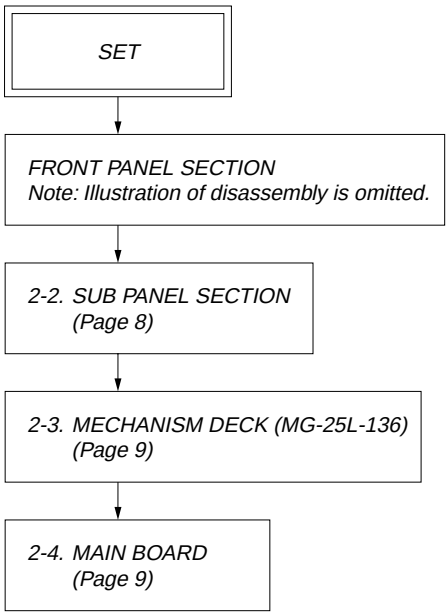


the car without ACC position
автомобиль не имеет положения ACC

SECTION 2
DISASSEMBLY

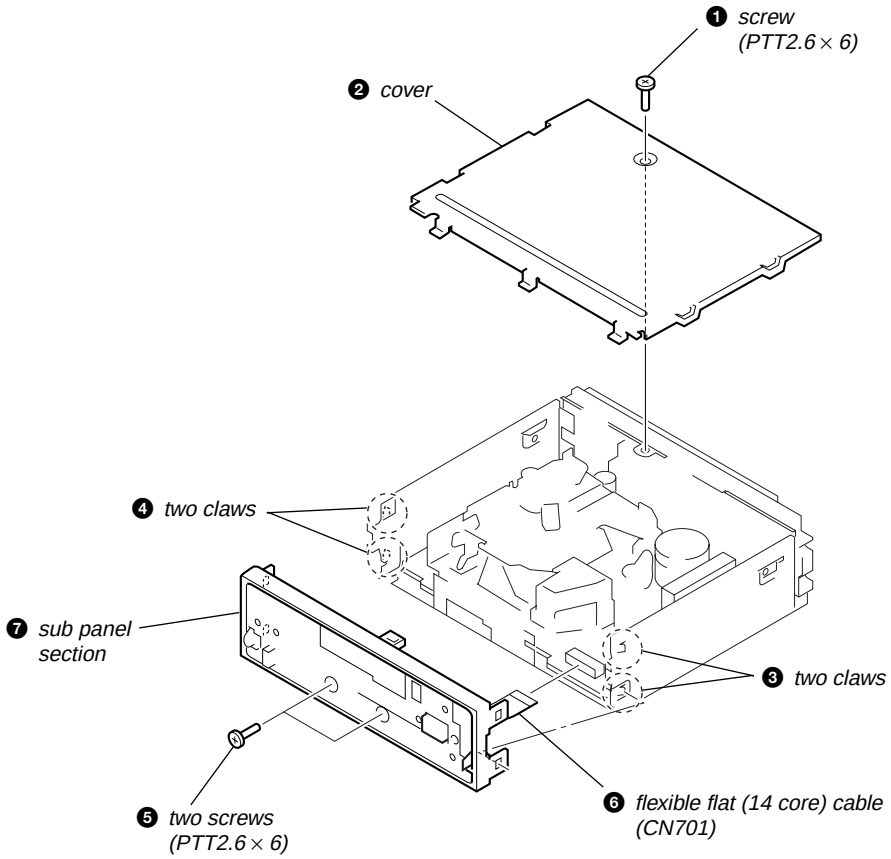
• This set can be disassembled in the order shown below.

2-1. DISASSEMBLY FLOW

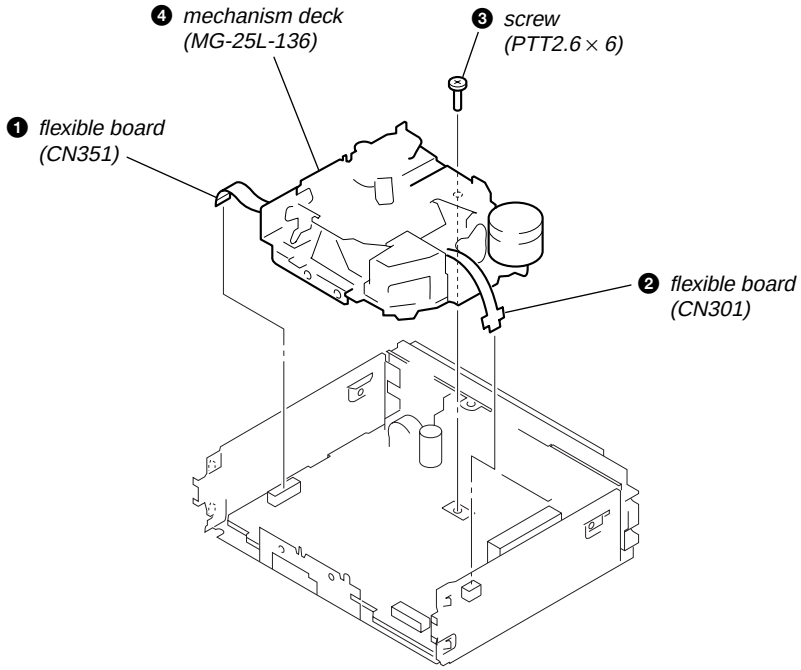


Note: Follow the disassembly procedure in the numerical order given.

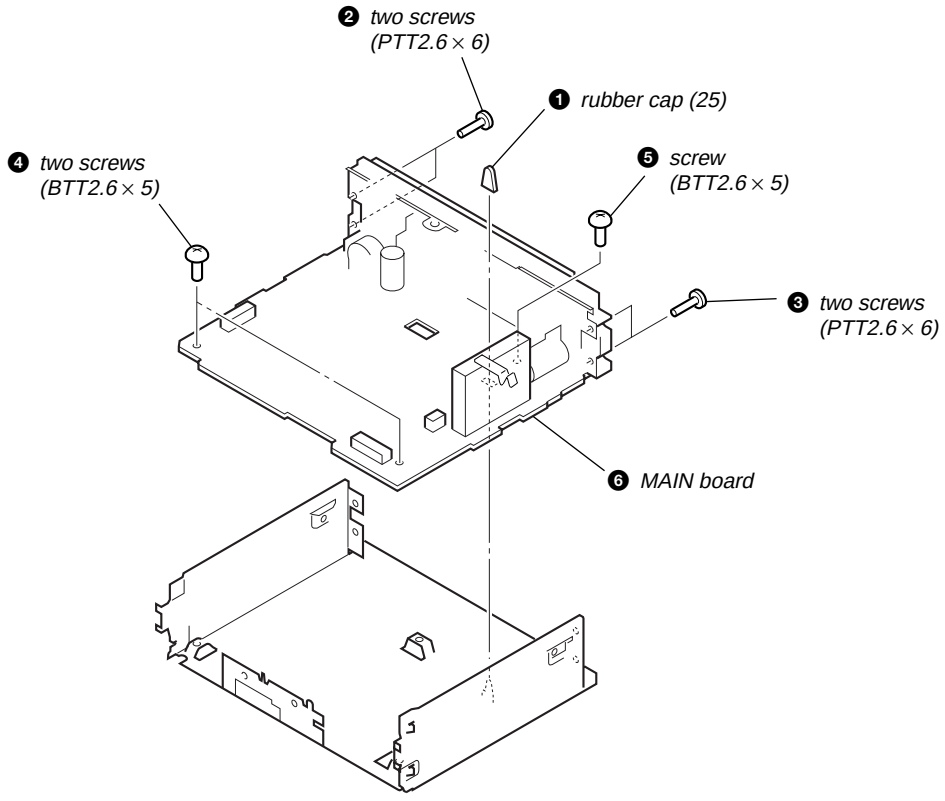
2-2. SUB PANEL SECTION



2-3. MECHANISM DECK (MG-25L-136)



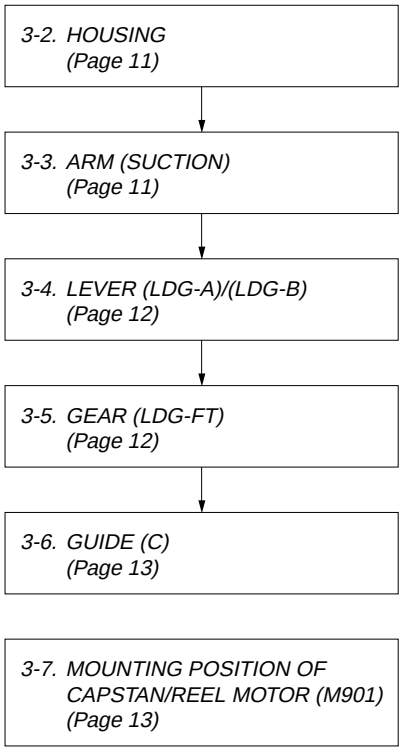
2-4. MAIN BOARD



SECTION 3
ASSEMBLY

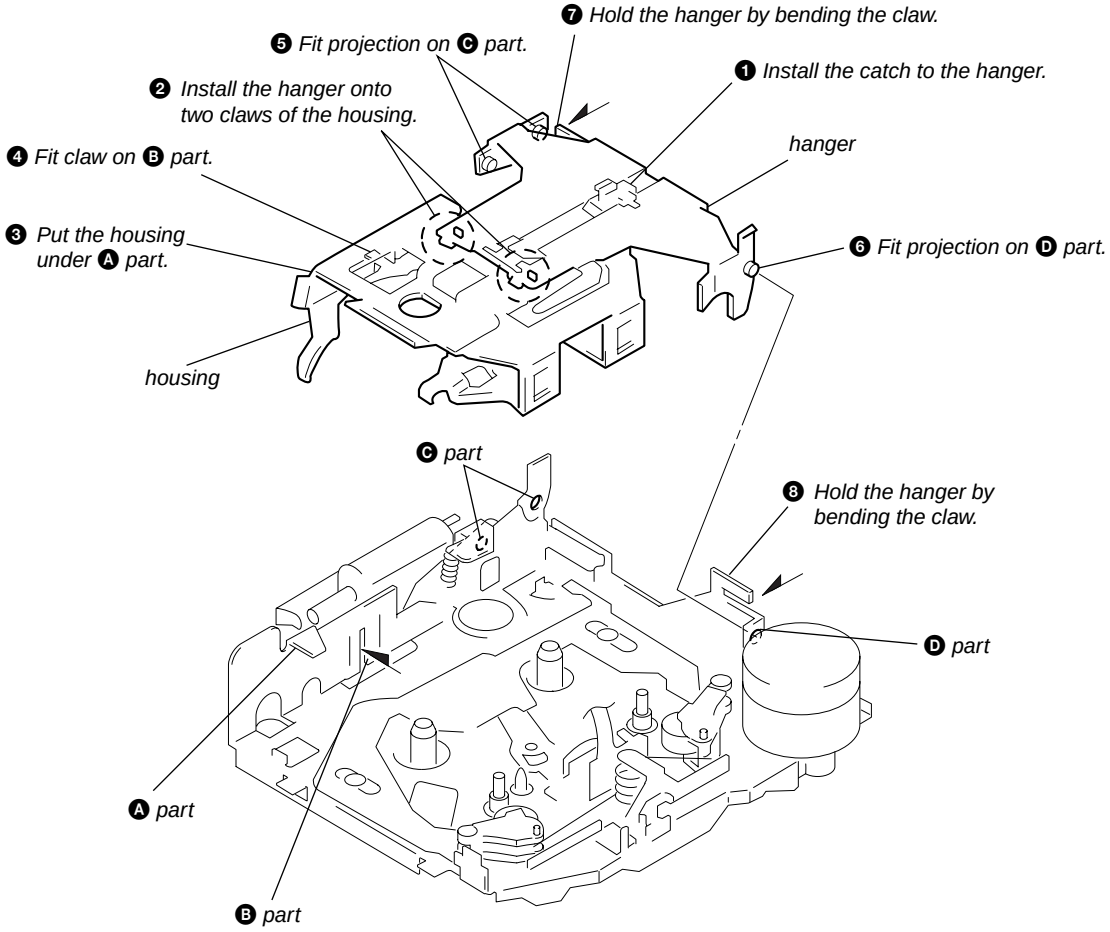
• This set can be assembled in the order shown below.

3-1. ASSEMBLY FLOW

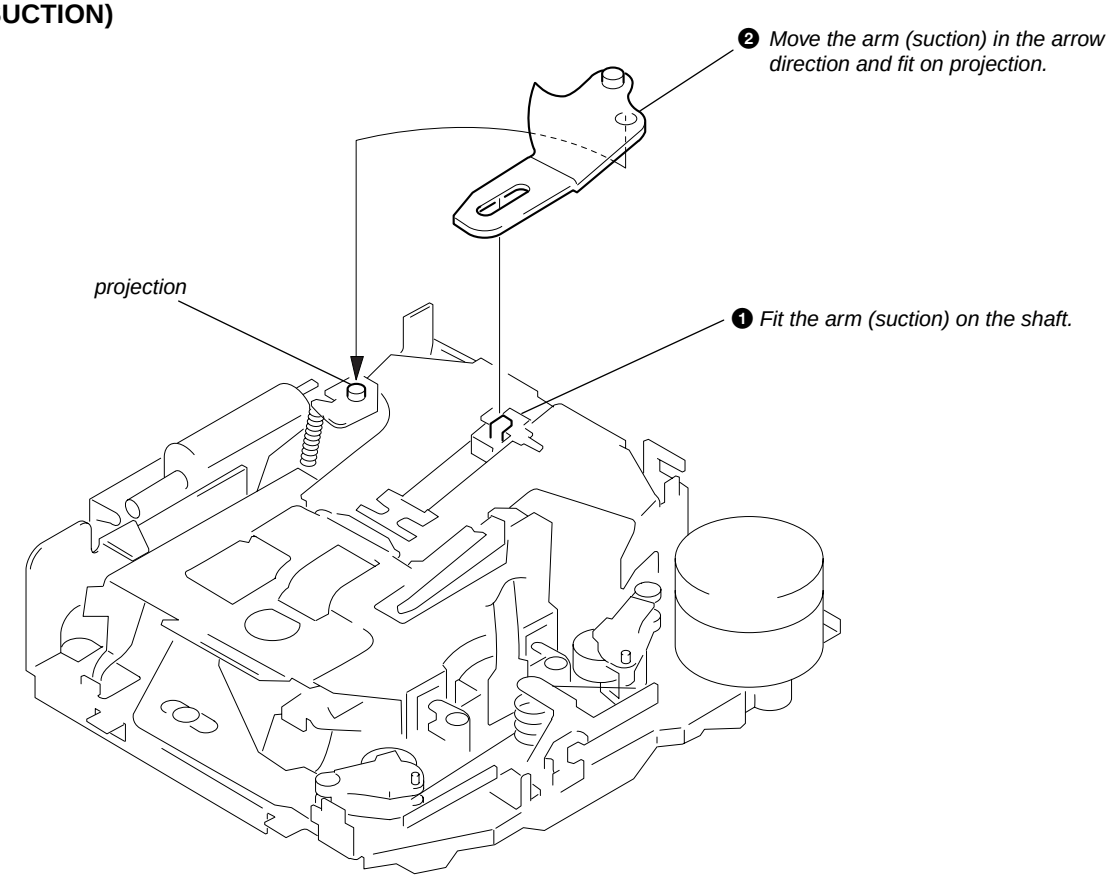


Note: Follow the assembly procedure in the numerical order given.

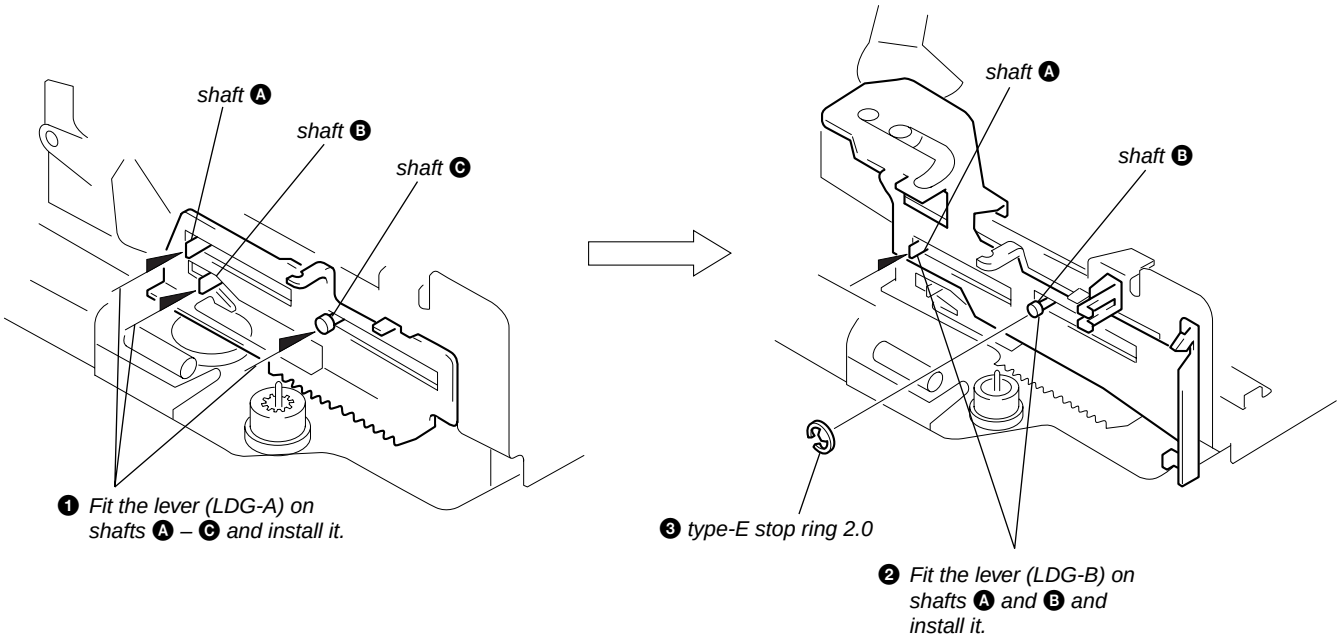
3-2. HOUSING


❼ Hold the hanger by bending the claw.
❺ Fit projection on Ⓒ part.
❶ Install the catch to the hanger.
❷ Install the hanger onto two claws of the housing.
hanger
❹ Fit claw on Ⓑ part.
❸ Put the housing under Ⓐ part.
❻ Fit projection on Ⓓ part.
housing
Ⓒ part
❽ Hold the hanger by bending the claw.
Ⓓ part
Ⓐ part
Ⓑ part

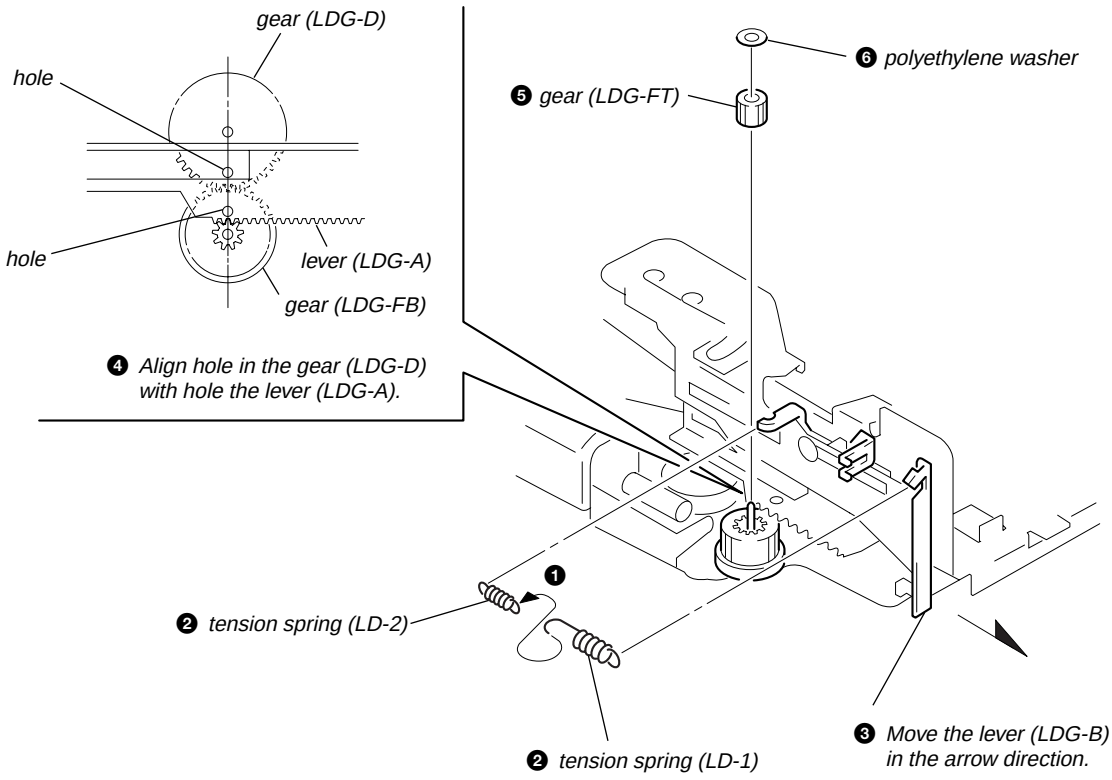
3-3. ARM (SUCTION)



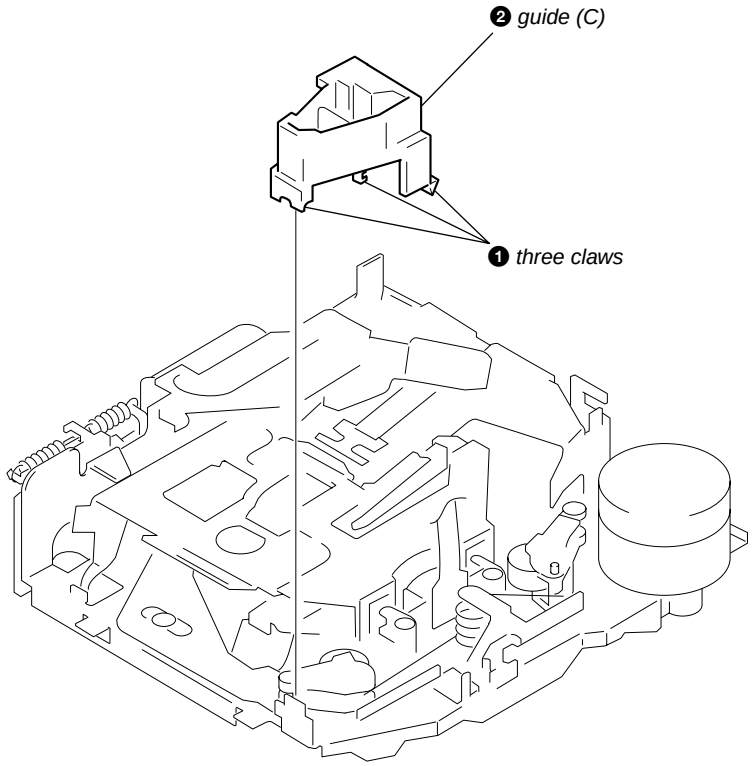
3-4. LEVER (LDG-A) / (LDG-B)


shaft Ⓐ
shaft Ⓑ
shaft Ⓒ
❶ Fit the lever (LDG-A) on shafts Ⓐ – Ⓒ and install it.
shaft Ⓐ
shaft Ⓑ
❸ type-E stop ring 2.0
❷ Fit the lever (LDG-B) on shafts Ⓐ and Ⓑ and install it.

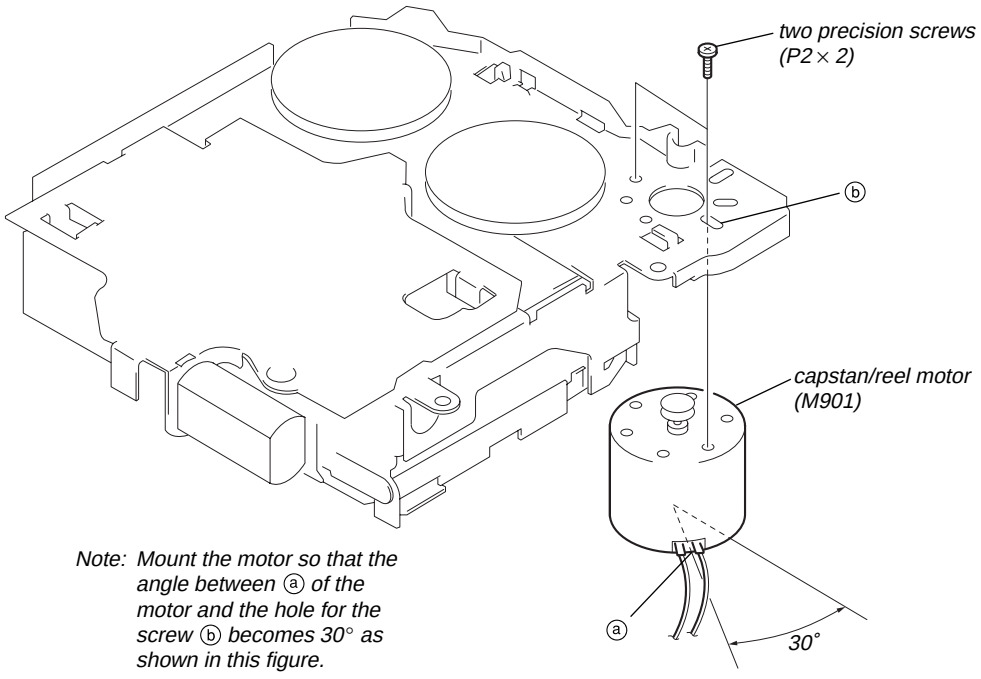
3-5. GEAR (LDG-FT)



3-6. GUIDE (C)



3-7. MOUNTING POSITION OF CAPSTAN/REEL MOTOR (M901)



Note: Mount the motor so that the angle between ⓐ of the motor and the hole for the screw ⓑ becomes 30° as shown in this figure.

SECTION 4
MECHANICAL ADJUSTMENTS

1. Clean the following parts with a denatured-alcohol-moistened swab:
   playback head pinch roller
   rubber belt capstan
   idler
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. The adjustments should be performed with the power supply voltage (14.4 V) unless otherwise noted.

Note: With this set, it is not necessary to apply suitable locking compound to the parts after the azimuth adjustment.

• TORQUE MEASUREMENT

Mode	Torque Meter	Meter Reading
Forward	CQ-102C	2.46 – 5.39 mN•m (25 – 55 g•cm) (0.35 – 0.76 oz•inch)
Forward Back Tension	CQ-102C	0.15 – 0.39 mN•m (1.5 – 4 g•cm) (0.02 – 0.06 oz•inch)
Reverse	CQ-102RC	2.46 – 5.39 mN•m (25 – 55 g•cm) (0.35 – 0.76 oz•inch)
Reverse Back Tension	CQ-102RC	0.15– 0.39 mN•m (1.5 – 4 g•cm) (0.02 – 0.06 oz•inch)
FF, REW	CQ-201B	4.91 – 14.70 mN•m (50 – 150 g•cm) (0.69 – 2.08 oz•inch)

• TAPE TENSION MEASUREMENT

Mode	Tension Meter	Meter Reading
Forward	CQ-403A	more than 5.89 mN•m (more than 60 g) (more than 2.12 oz)
Reverse	CQ-403R	

SECTION 5
ELECTRICAL ADJUSTMENTS

TAPE DECK SECTION | 0 dB= 0.775 V

1. The adjustments should be performed in the order given in this service manual.
2. The adjustments should be performed for both L-CH and R-CH.

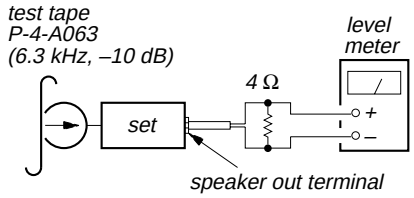
TEST TAPE

Type	Signal	Used for
P-4-A063	6.3 kHz, –10 dB	head azimuth adjustment
WS-48A	3 kHz, 0 dB	tape speed adjustment

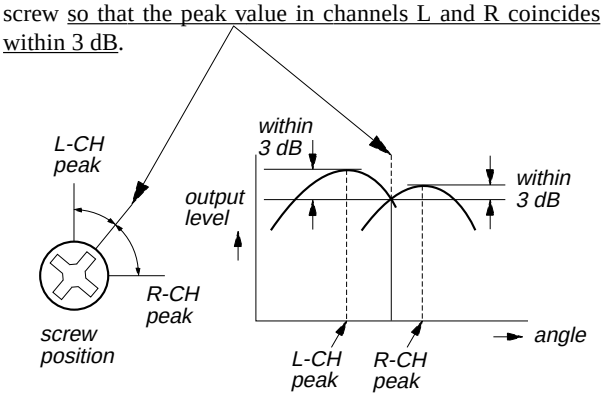
PB HEAD AZIMUTH ADJUSTMENT

Procedure:

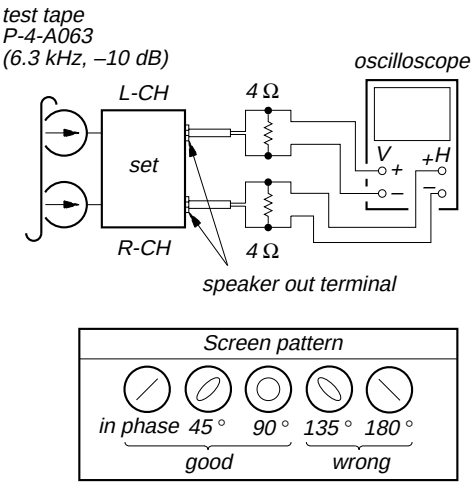
1. Put the set into the FWD PB mode.



2. Turn the screw and check the output peak value. Adjust the screw so that the peak value in channels L and R coincides within 3 dB.



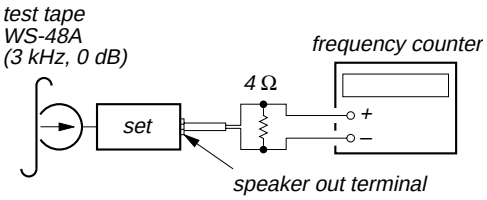
3. Check the phase in the FWD PB mode.



4. Repeat the above adjustment for the REV PB mode.
5. Check that output level difference between FWD PB mode and REV PB mode is within 4 dB.

Adjustment Location: See page 15

TAPE SPEED ADJUSTMENT
Setting:

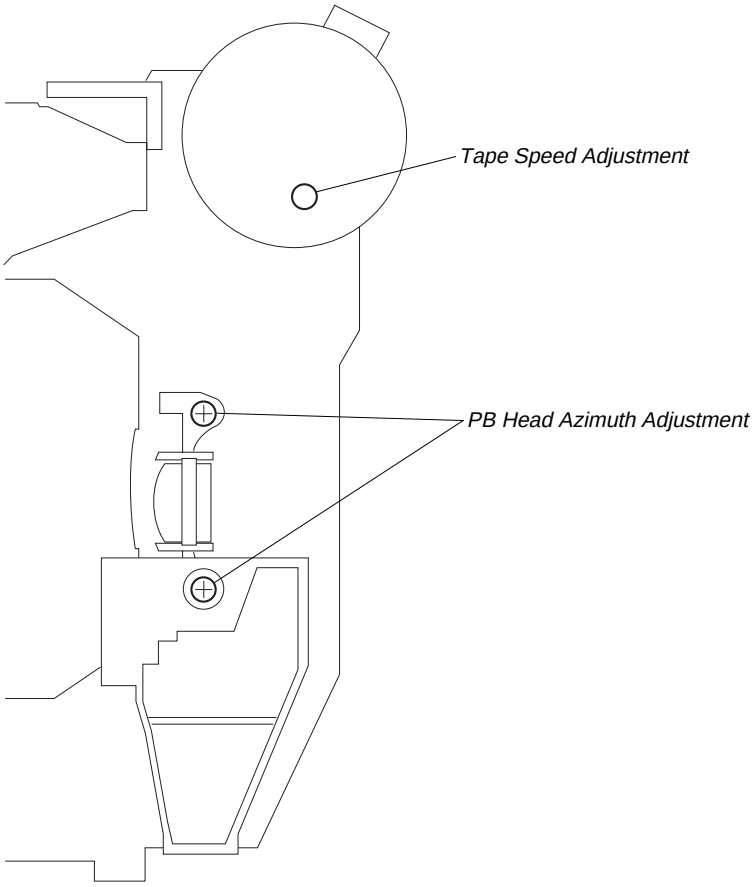


Procedure:
1. Put the set into the FWD PB mode.
2. Adjust adjustment resistor for inside capstan motor so that the reading on the frequency counter becomes in 3,015 Hz.

Specified Value: 2,940 to 3,090 Hz

Adjustment Location:

– Set Upper View –



TUNER SECTION

Tuner section adjustments are done automatically in this set.

SECTION 6
DIAGRAMS

6-1. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:
- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ▬ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

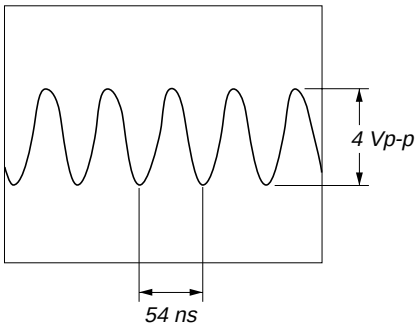
Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

Note on Schematic Diagram:
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ▭ : panel designation.
- ▬ : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  [ ] : TAPE PLAYBACK
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ⇨ : TAPE PLAYBACK
  ⇨ : BUS AUDIO IN

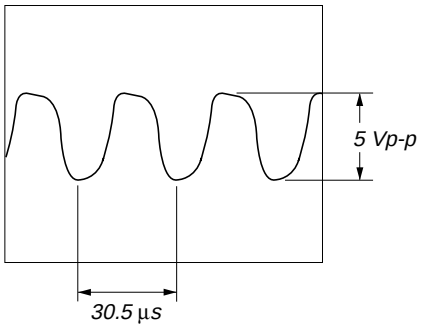
• Waveforms

– MAIN Board –

① IC501 ⑫ (OSCOUT)

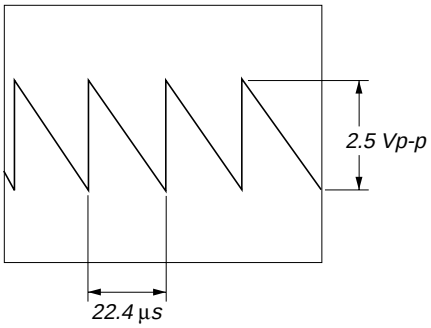


② IC501 ⑯ (XOUT)

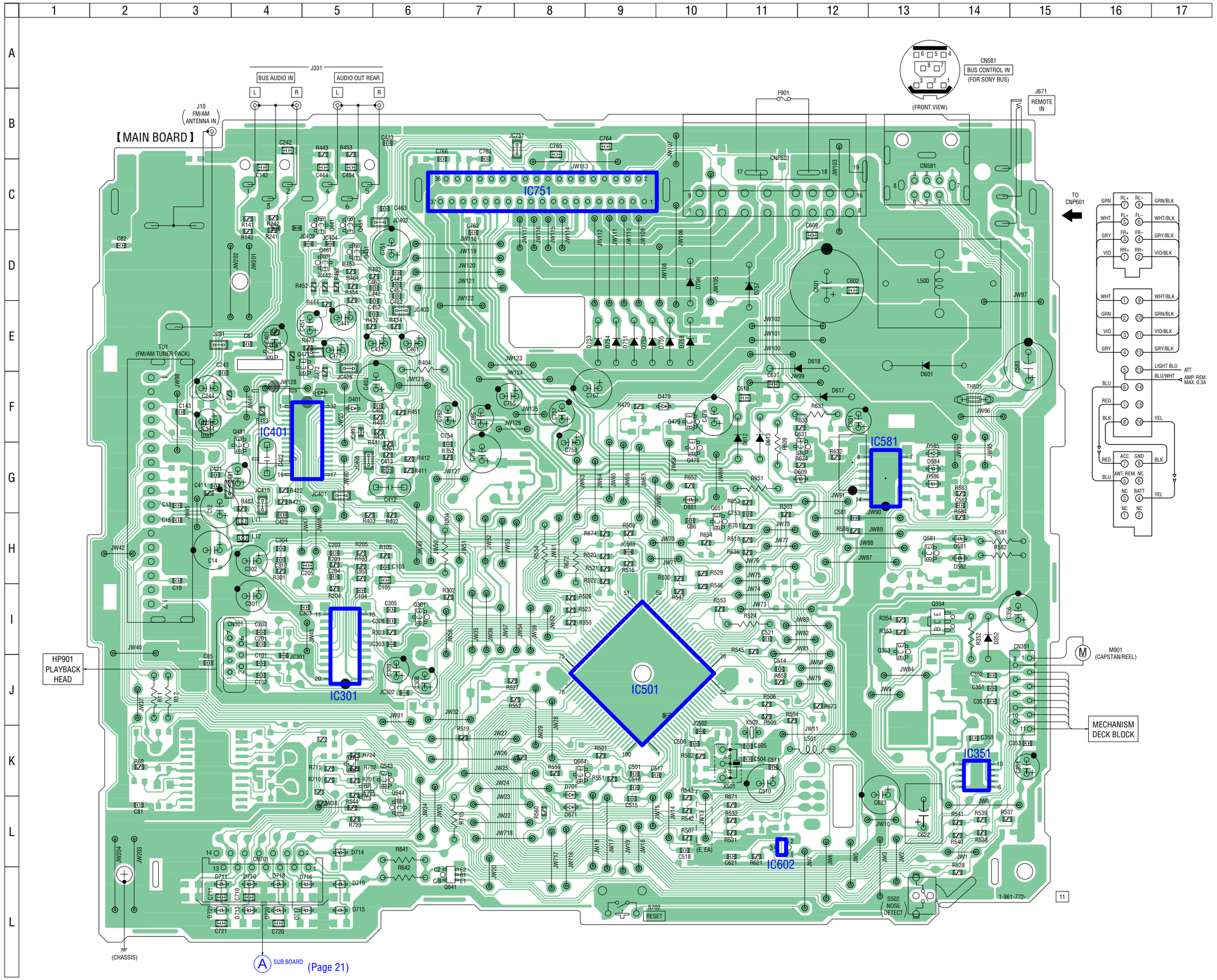


– DISPLAY Board –

③ IC901 ㉞ (OSC)



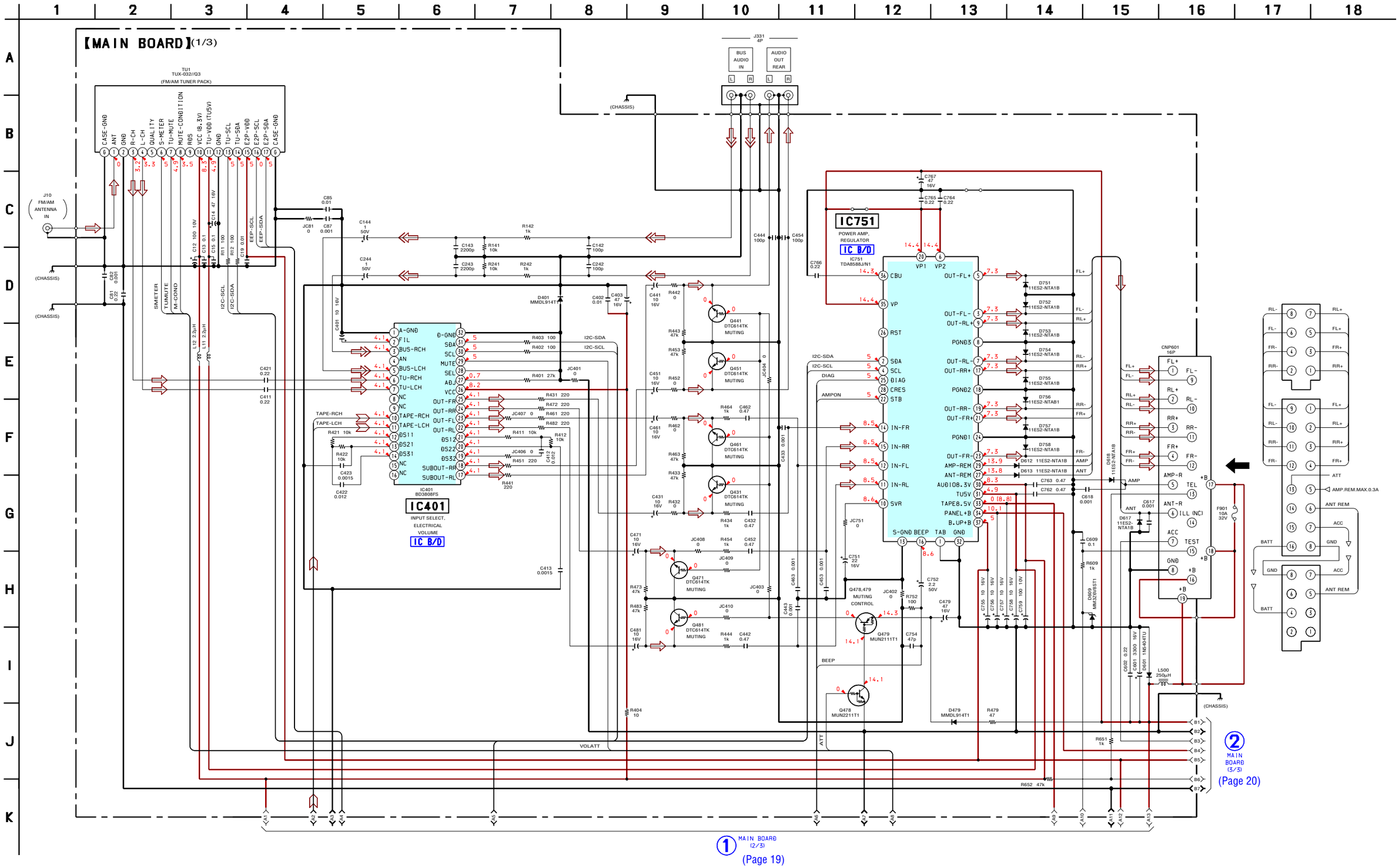
6-2. PRINTED WIRING BOARD – MAIN Board – :Uses unleaded solder.



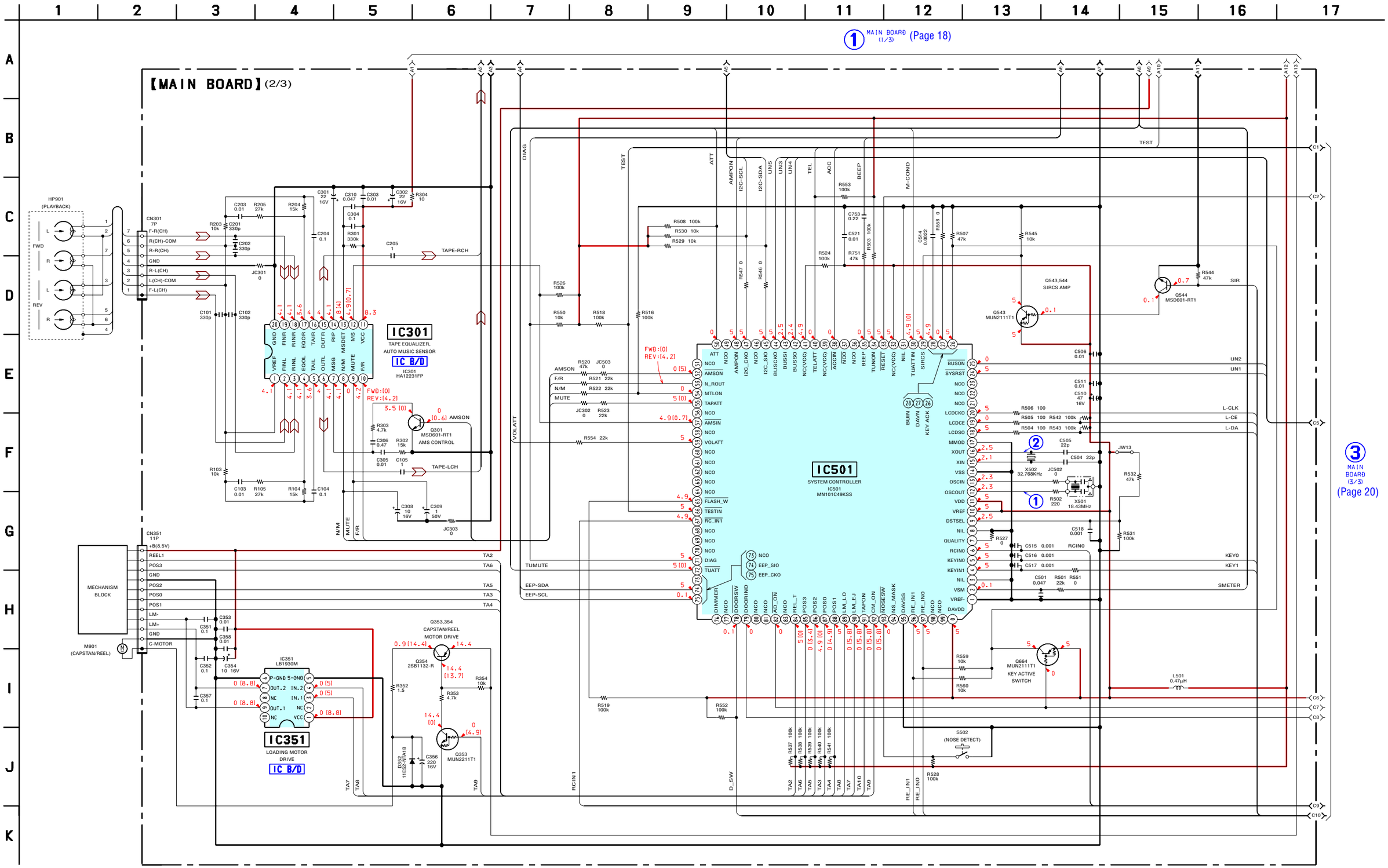
- **Semiconductor Location**

Ref. No.	Location
D352	I-14
D401	F-5
D479	F-10
D581	H-14
D582	H-14
D584	G-13
D585	G-13
D586	G-13
D609	G-12
D612	F-11
D613	F-11
D617	F-12
D618	E-12
D651	G-10
D671	L-8
D701	K-8
D710	M-4
D711	M-3
D713	M-4
D714	L-5
D715	M-5
D716	M-5
D717	M-5
D718	M-4
D719	M-5
D720	M-4
D721	M-3
D751	E-9
D752	E-9
D753	E-9
D754	E-9
D755	E-10
D756	D-10
D757	D-11
D758	E-10
IC301	I-5
IC351	K-14
IC401	F-5
IC501	J-9
IC581	G-13
IC602	L-11
IC751	C-8
Q301	I-6
Q353	I-13
Q354	I-13
Q431	D-5
Q441	C-5
Q451	C-5
Q461	D-5
Q471	E-5
Q478	G-10
Q479	F-10
Q481	G-4
Q543	K-6
Q544	L-6
Q581	H-13
Q631	G-12
Q641	M-7
Q651	H-10
Q664	K-8

6-3. SCHEMATIC DIAGRAM – MAIN Board (1/3) – • See page 24 for IC Block Diagrams.

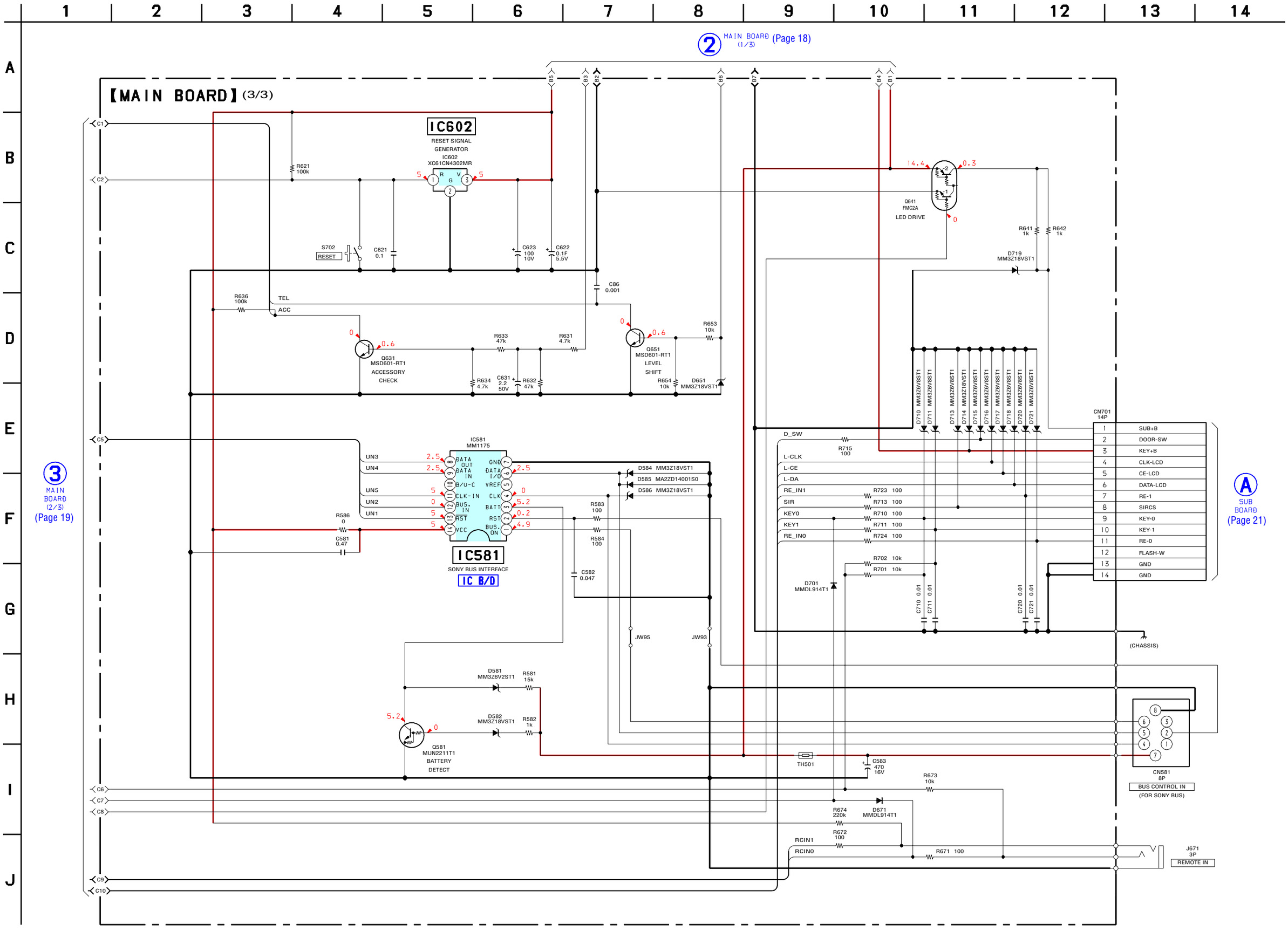


6-4. SCHEMATIC DIAGRAM – MAIN Board (2/3) – • See page 16 for Waveforms. • See page 24 for IC Block Diagrams. • See page 25 for IC Pin Function Description.

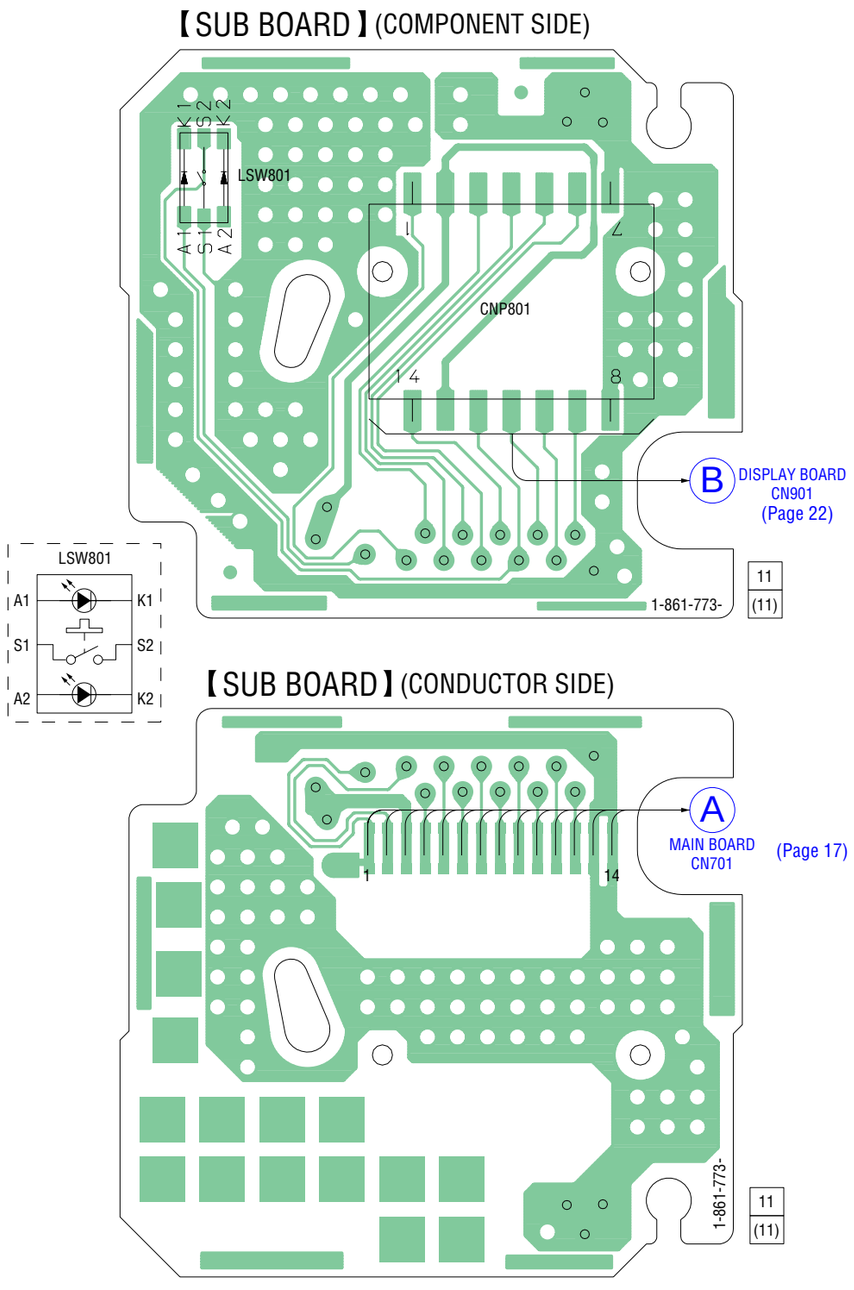


6-5. SCHEMATIC DIAGRAM – MAIN Board (3/3) –

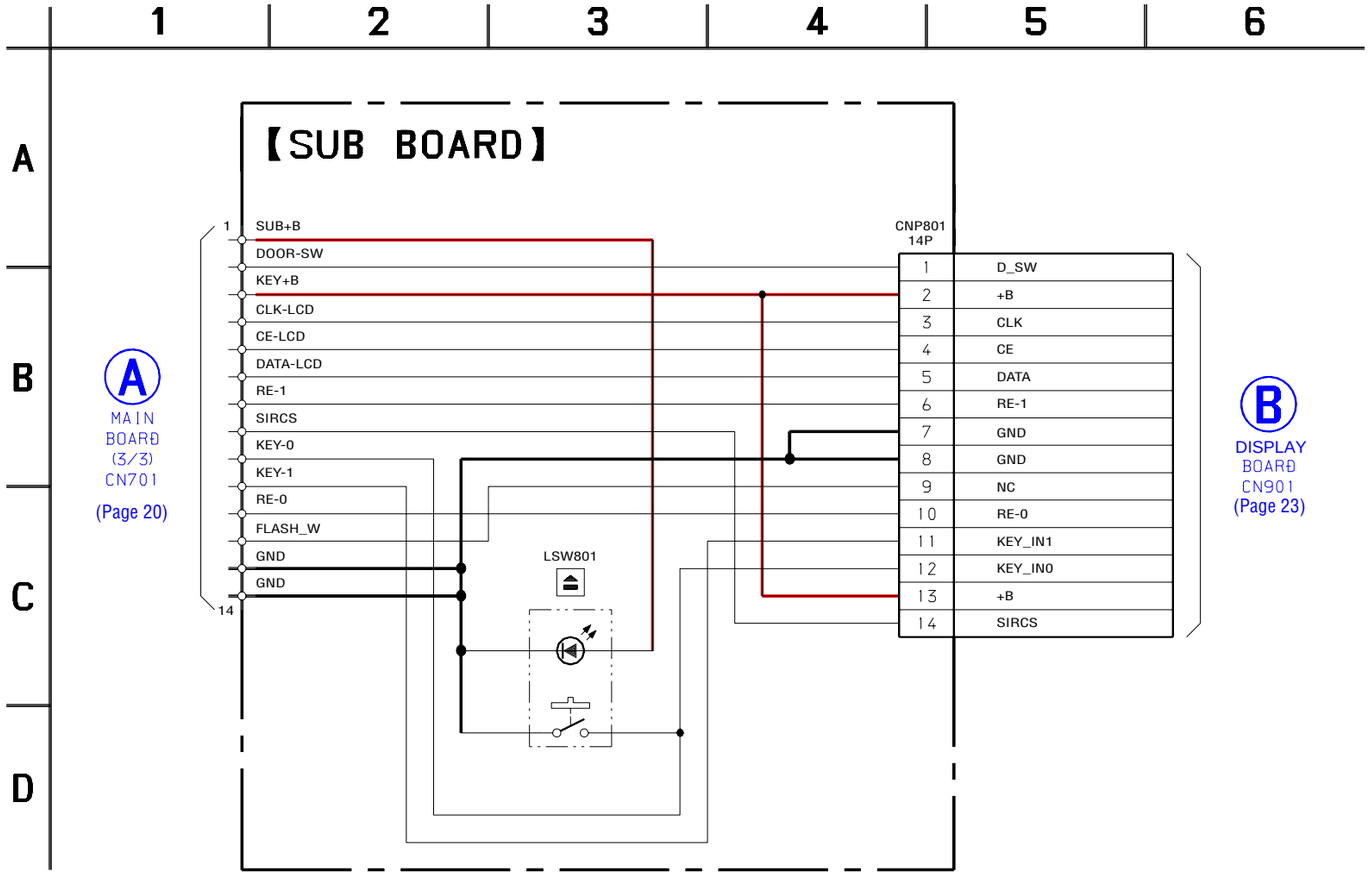
• See page 24 for IC Block Diagrams.



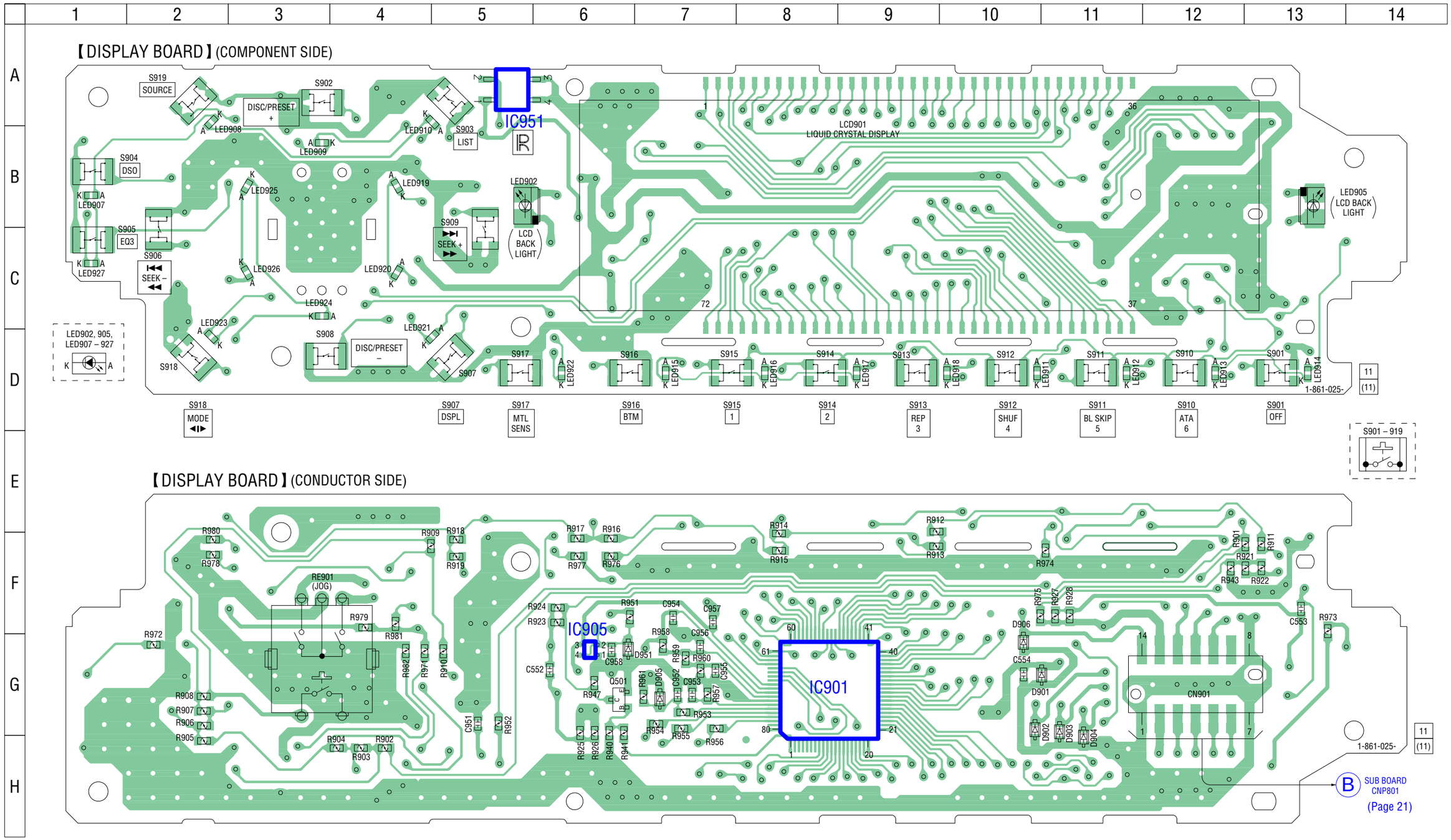
6-6. PRINTED WIRING BOARD – SUB Board – :Uses unleaded solder.



6-7. SCHEMATIC DIAGRAM – SUB Board –



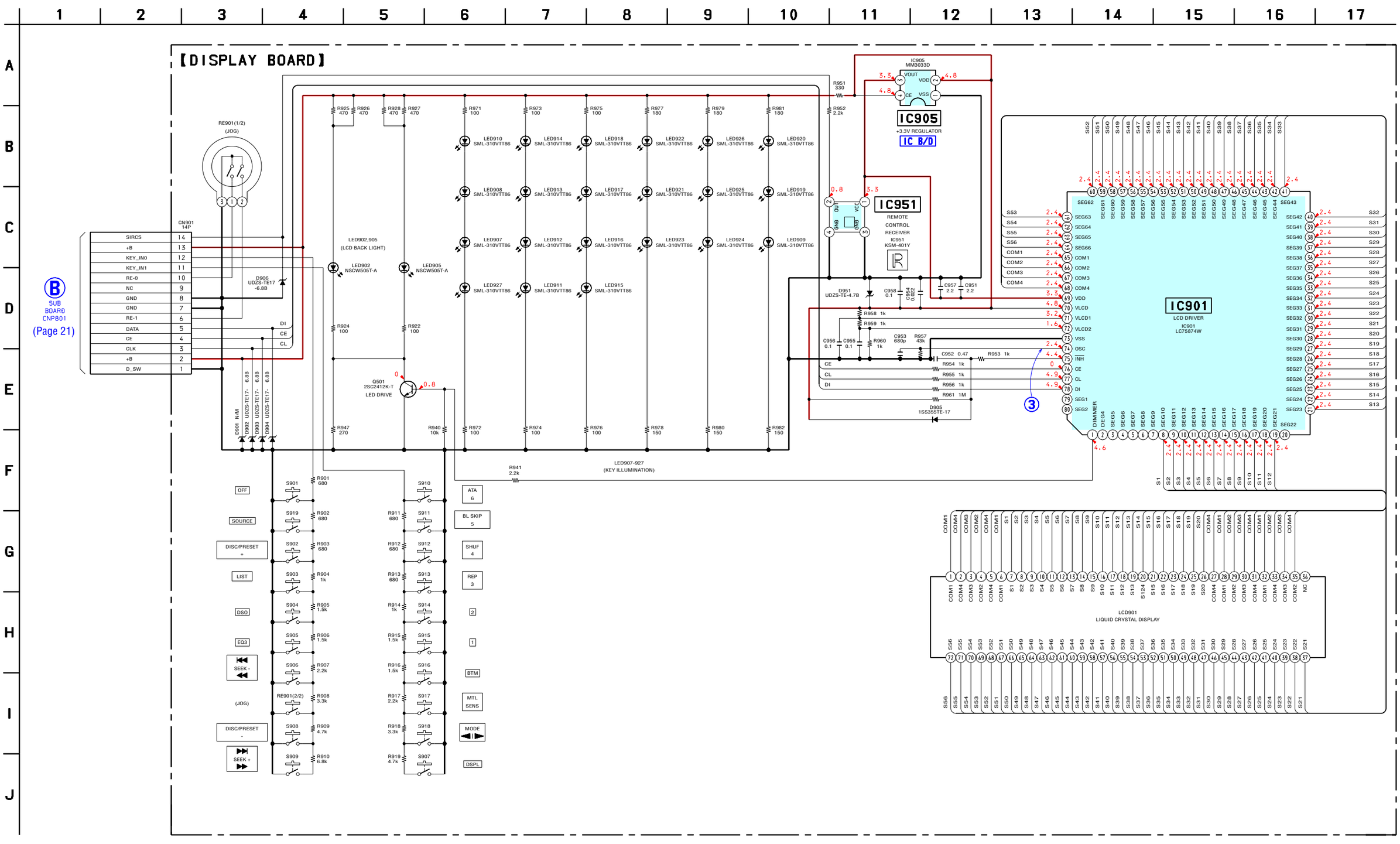
6-8. PRINTED WIRING BOARD – DISPLAY Board – :Uses unleaded solder.



- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D902	G-10	LED905	B-13	LED918	D-10
D903	G-11	LED907	B-1	LED919	B-4
D904	H-11	LED908	A-2	LED920	C-4
D905	G-7	LED909	B-3	LED921	D-5
D906	G-10	LED910	A-4	LED922	D-6
D951	G-6	LED911	D-10	LED923	D-2
		LED912	D-11	LED924	C-3
IC901	G-8	LED913	D-12	LED925	B-3
IC905	G-6	LED914	D-13	LED926	C-3
IC951	A-5	LED915	D-7	LED927	C-1
		LED916	D-8		
LED902	B-5	LED917	D-9	Q501	G-6

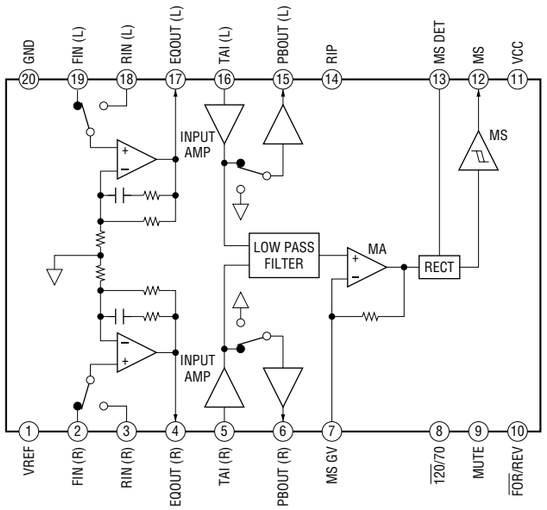
6-9. SCHEMATIC DIAGRAM – DISPLAY Board – • See page 16 for Waveform.



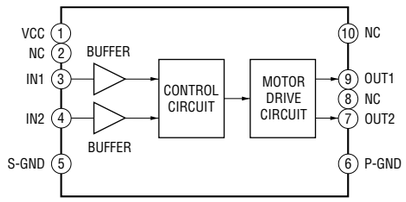
- **IC Block Diagrams**

– MAIN Board –

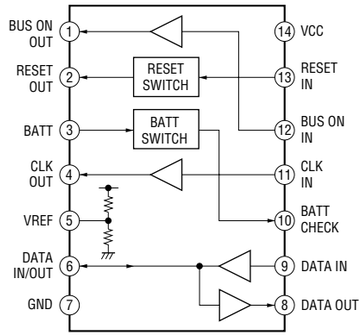
IC301 HA12231FPEL



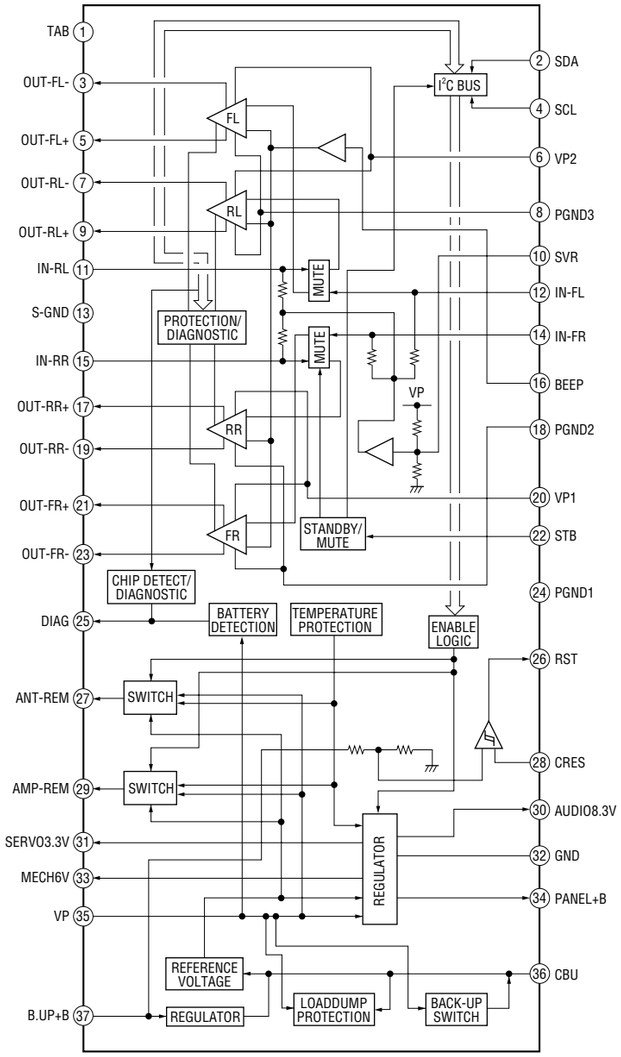
IC351 LB1930M-TLM-E



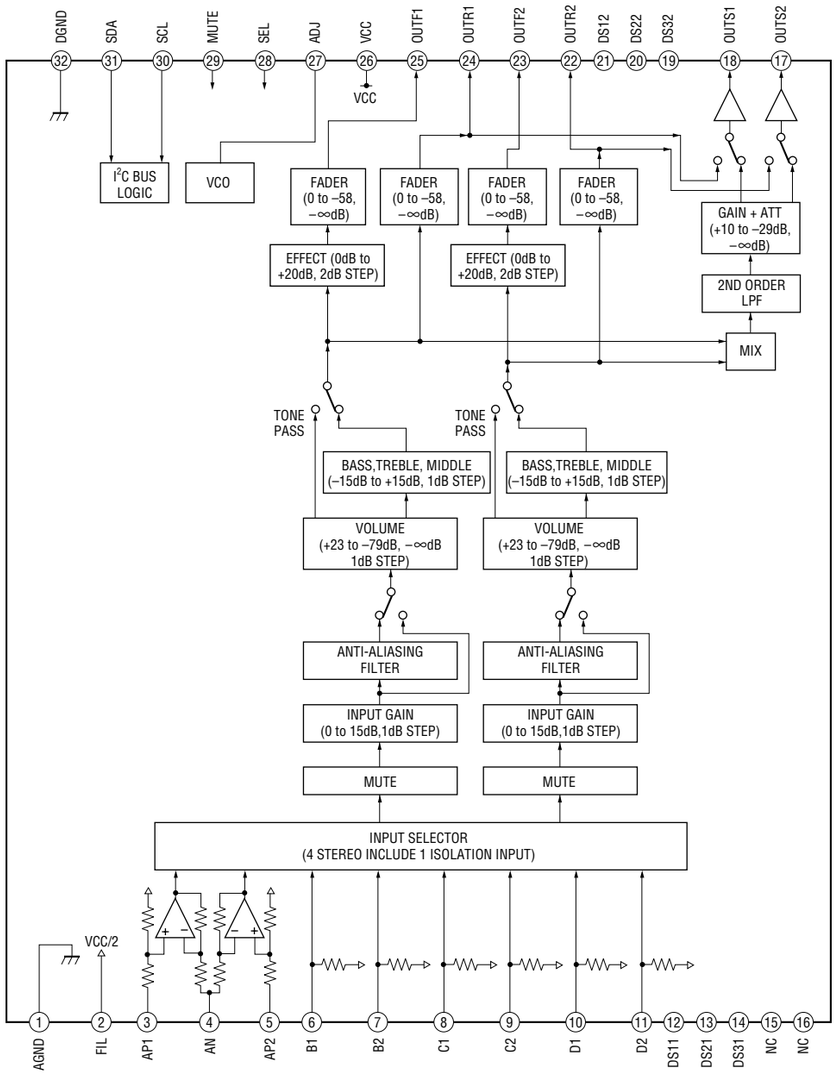
IC581 MM1175XFF



IC751 TDA8588J/N1

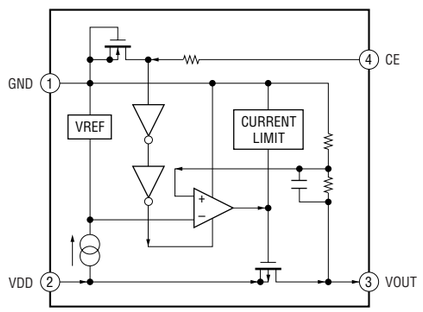


IC401 BD3808FS-FE2



– DISPLAY Board –

IC905 MM3033DULE



- **IC Pin Function Description**

MAIN BOARD IC501 MN101C49KSS (SYSTEM CONTROLLER)

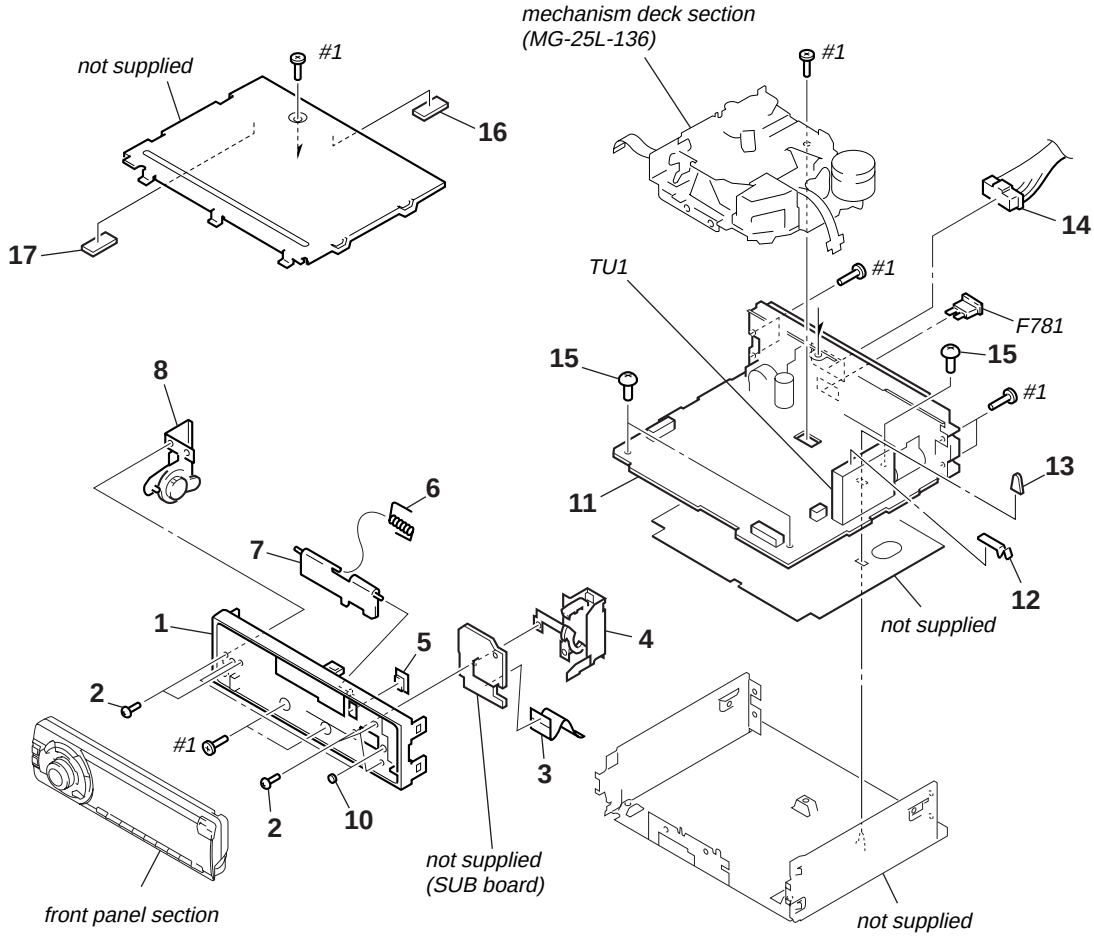
Pin No.	Pin Name	I/O	Description
1	VREF –	I	Negative reference voltage (0V) input terminal
2	VSM	I	FM and AM signal-meter voltage detection signal input from the tuner unit (A/D input)
3	NIL	I	Not used
4, 5	KEYIN1, KEYIN0	I	Front panel key input terminal (A/D input)
6	RCIN0	I	Rotary remote commander key input terminal (A/D input)
7	QUALITY	I	Noise level detection signal input at SEEK mode (A/D input)
8	NIL	I	Not used
9	DSTSEL	I	Setting terminal for the destination
10	VREF	I	Reference voltage (+5V) input terminal
11	VDD	—	Power supply terminal (+5V)
12	OSCOUT	O	System clock output for high speed operation (18.43 MHz)
13	OSCIN	I	System clock input for high speed operation (18.43 MHz)
14	VSS	—	Ground terminal
15	XIN	I	System clock input for high speed operation (32.768 kHz)
16	XOUT	O	System clock output for high speed operation (32.768 kHz)
17	MMOD	I	Setting terminal for the memory mode “L”: single chip mode
18	LCDSO	O	Serial data output to the LCD drive IC
19	LCDCE	O	Chip enable signal output to the LCD drive IC
20	LCDCKO	O	Serial data transfer clock signal output to the LCD drive IC
21 to 23	NCO	O	Not used
24	$\overline{\text{SYSRST}}$	O	System reset signal output to the SONY bus interface
25	$\overline{\text{BUSON}}$	O	SONY bus on/off control signal output terminal “L”: bus on
26	KEY ACK	I	Acknowledge signal (wake up signal) input terminal for the key entry Acknowledge signal is input to accept any function key in the standby status On at input of “H”
27	DAVN	I	Data transmit completed detection signal input from the RDS decoder Not used
28	BUIN	I	Back up power supply detection signal input terminal “L” is input at low voltage
29	SIRCS	I	SIRCS signal input terminal
30	TUATTIN	I	Attenuate control signal input from the tuner pack
31, 32	NIL	I	Not used
33	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator and reset switch “L”: reset For several hundreds msec. after the power supply rises, “L” is input, then it changes to “H”
34	TUNON	O	Power on/off control signal output for tuner section
35	BEEP	O	Beep sound drive signal output terminal
36, 37	NCO	O	Not used
38	$\overline{\text{ACCIN}}$	I	Accessory power detection signal input terminal “L”: accessory power on
39	NC (VCC)	O	Not used
40	TELATT	I	Telephone muting detection signal input terminal At input of “H”, the audio signal is attenuated by 20 dB
41	NC (VCC)	I	Not used
42	BUSSO	O	Serial data output to the SONY bus interface
43	BUSSI	I	Serial data input from the SONY bus interface
44	BUSCKO	O	Serial data transfer clock signal output to the SONY bus interface
45	I2C_SIO	I/O	IIC two-way data bus with the tuner pack, electrical volume and power amplifier
46	NCO	O	Not used
47	I2C_CKO	O	I2C bus clock signal output to the tuner pack, electrical volume and power amplifier
48	AMPON	O	AMP muting on/off control signal output terminal

Pin No.	Pin Name	I/O	Description
49	NCO	O	Not used
50	ATT	O	Muting on/off control signal output terminal
51	NCO	O	Not used
52	$\overline{\text{AMSON}}$	O	Automatic music sensor detection signal output terminal "L": music is present, "H": music is not present
53	N_ROUT	O	Tape direction control signal output terminal "L": reverse, "H": forward
54	MTLON	I/O	METAL control in/out terminal At initial mode: valid/invalid selection input of METAL function (valid at "L" input) At normal mode: METAL on/off control signal output ("H": METAL on)
55	TAPATT	O	Tape attenuate on/off control signal output terminal "H": muting on Active at ATA, FF/REW mode
56	NCO	O	Not used
57	$\overline{\text{AMSIN}}$	I	Automatic music sensor detection signal input terminal "L": music is present
58	NCO	O	Not used
59	VOLATT	O	Attenuate on/off control signal output to the electrical volume
60 to 64	NCO	O	Not used
65	$\overline{\text{FLASH\_W}}$	I	Internal flash memory data write control signal input terminal
66	$\overline{\text{TESTIN}}$	I	Test mode setting terminal "L": test mode, normally fixed at "H"
67	$\overline{\text{RC\_IN1}}$	I	Rotary remote commander shift key input terminal "L": shift key on
68 to 70	NCO	O	Not used
71	DIAG	I	Status data input from the power amplifier
72	$\overline{\text{TUATT}}$	O	Tuner muting on/off control signal output terminal
73	NCO	O	Not used
74	EEP_SIO	I/O	Two-way data bus with the EEPROM
75	EEP_CKO	O	Serial data transfer clock signal output to the EEPROM
76	DIMMER	O	LCD back light automatic dimmer control signal output terminal Not used
77	NCO	O	Not used
78	$\overline{\text{DOORSW}}$	I	Front panel open/close detection input terminal "L": close
79	DOORIND	O	Illumination LED drive signal output of the sub panel
80, 81	NCO	O	Not used
82	$\overline{\text{AD\_ON}}$	O	A/D converter power control signal output When the KEY ACK (pin 26) that controls reference voltage power for key A/D conversion input is active, "L" is output from this terminal to enable the input
83	NCO	O	Not used
84	REL_T	I	Rotation detect signal input of the capstan/reel motor
85, 86	POS3, POS2	I	Tape position detect switch input terminal
87, 88	POS0, POS1	I	Tape position detect switch input terminal
89	LM_LO	O	Loading motor drive signal output (load-in direction)
90	LM_EJ	O	Loading motor drive signal output (eject direction)
91	TAPEON	O	Tape system power supply on/off control signal output terminal "H": tape on
92	CM_ON	O	Capstan/reel motor on/off control signal output terminal "H": motor on
93	$\overline{\text{NOSESW}}$	I	Front panel remove/attach detection signal input terminal "L": front panel is attached
94	NS_MASK	O	Discharge control signal output for the noise detection circuit "H": discharge Not used
95	DAVSS	—	Ground terminal
96, 97	RE_IN0, RE_IN1	I	Jog dial pulse input terminal
98, 99	NCO	O	Not used
100	DAVDD	—	Power supply terminal (+5V)

SECTION 7
EXPLODED VIEWS

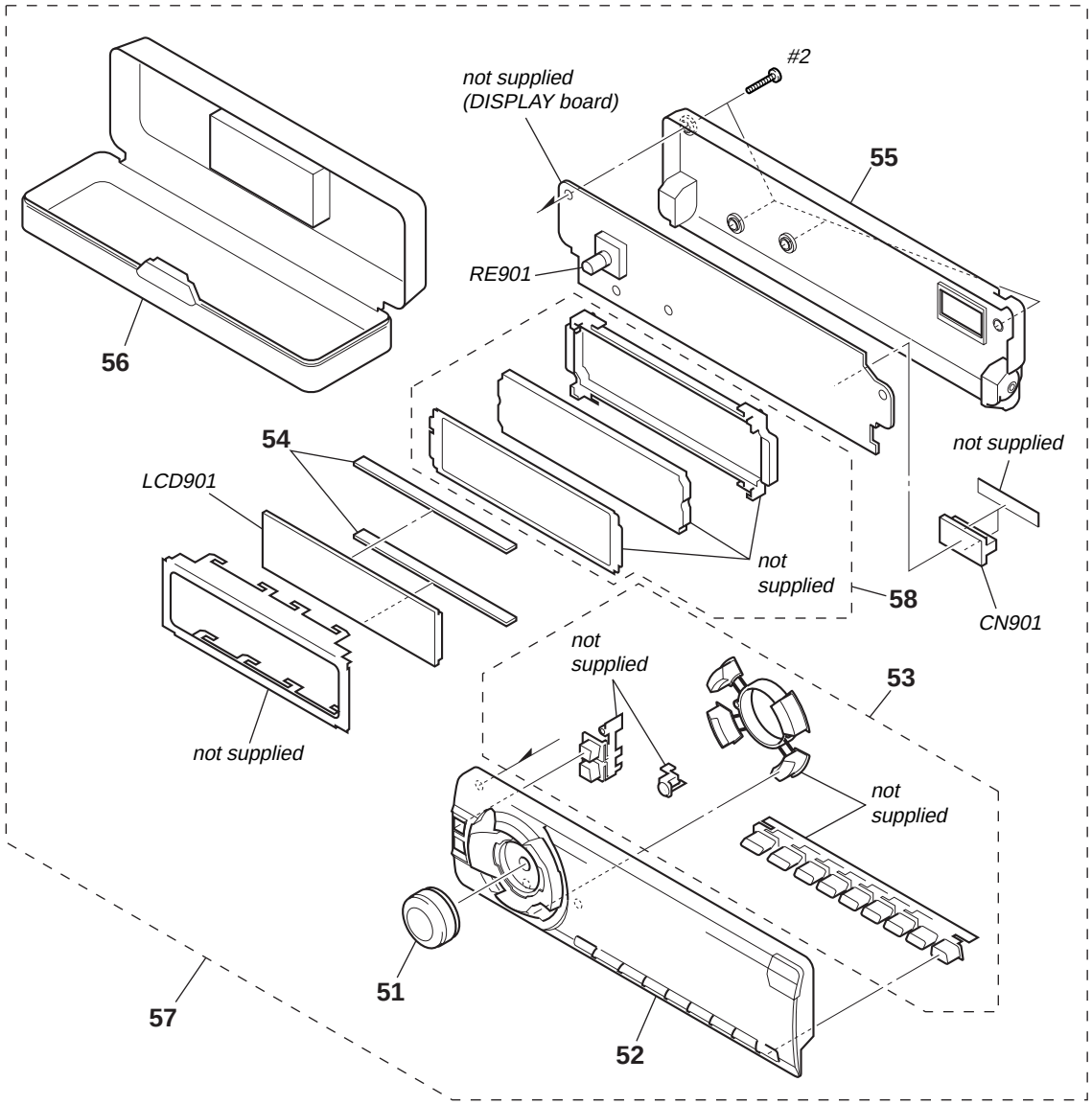
NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories are given in the last of the electrical parts list.

7-1. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
1	X-3384-672-1	PANEL ASSY, SUB	
2	3-042-244-01	SCREW (T)	
3	1-792-195-11	CABLE, FLEXIBLE FLAT (14 CORE)	
4	X-3384-259-1	LOCK ASSY	
5	3-040-990-01	BUTTON (EJECT) (⏏)	
6	3-935-003-01	SPRING, TORSION	
7	3-027-437-12	DOOR, CASSETTE	
8	X-3384-203-1	GEAR ASSY	
10	3-260-247-01	CUSHION (SUB PANEL)	
11	A-3283-618-A	MAIN BOARD, COMPLETE	
12	2-021-848-01	SHEET (TU), GROUND	
13	3-012-859-21	CAP (25), RUBBER	
14	1-776-527-61	CORD (WITH CONNECTOR) (ISO) (POWER)	
15	2-050-124-01	SCREW +BTT 2.6X5	
* 16	3-046-991-02	SPACER (COVER R)	
* 17	3-046-990-01	SPACER (COVER L)	
F781	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A/32V)	
TU1	A-3220-961-A	TUNER UNIT (TUX-032//Q3)	
#1	7-685-792-09	SCREW +PTT 2.6X6 (S)	

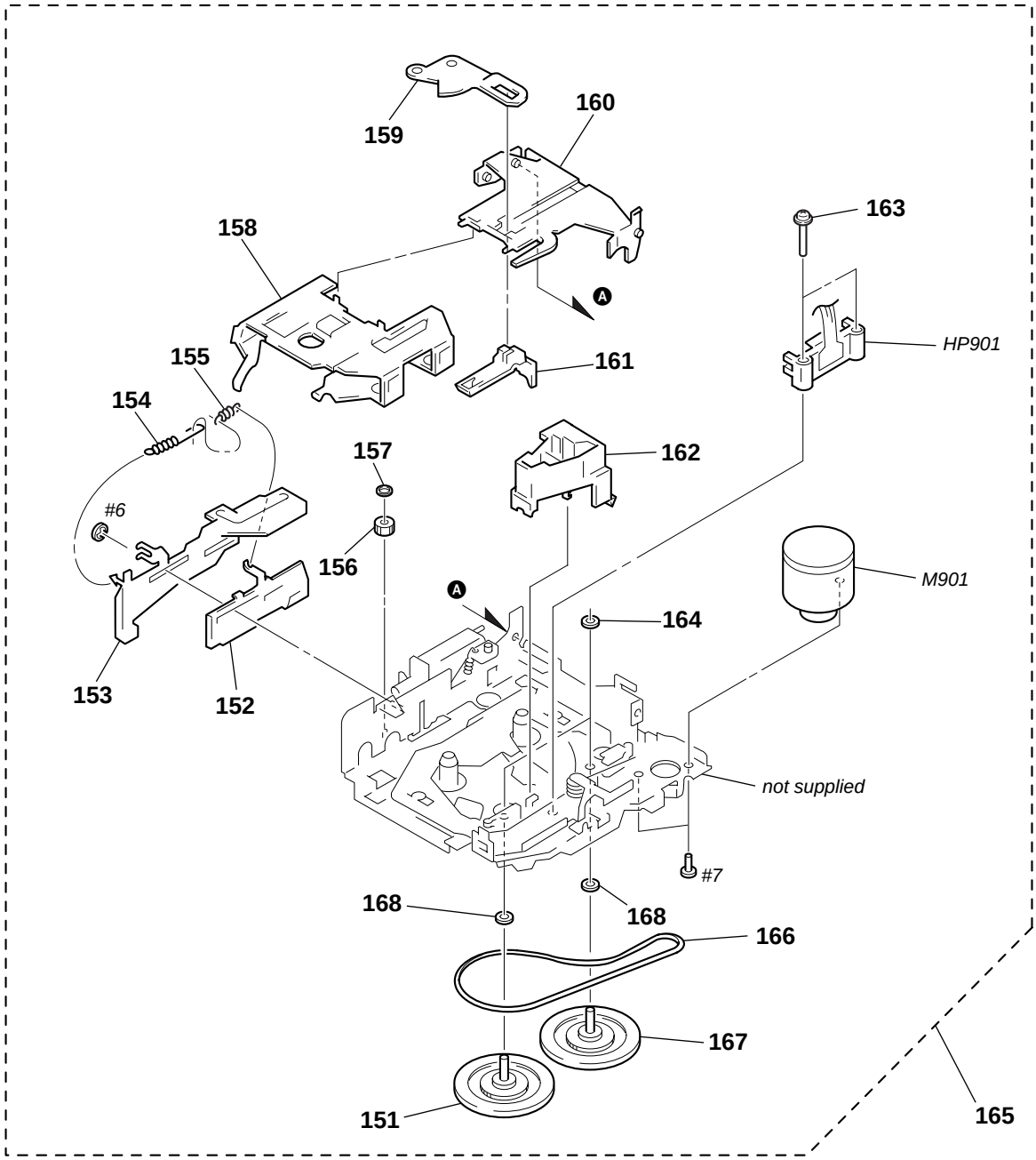
7-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	X-3384-637-1	KNOB VOL (SVX) ASSY	
52	X-3384-740-2	PANEL ASSY (SVX), FRONT	
53	X-3384-288-2	BUTTON KIT (SVX) ASSY	
54	1-780-097-11	CONDUCTIVE BOARD, CONNECTION	
55	X-3384-284-1	PANEL ASSY (SVX), FRONT BACK	
56	X-3378-390-3	CASE (PANEL)	

Ref. No.	Part No.	Description	Remark
57	A-3282-083-A	FRONT PANEL ASSY (FP-XR-F5100EE)	
58	X-3384-501-2	PLATE SUB ASSY (N), LIGHT GUIDE	
CN901	1-817-158-11	PLUG, CONNECTOR 14P	
LCD901	1-805-456-11	DISPLAY PANEL, LIQUID CRYSTAL	
RE901	1-478-474-11	ENCODER, ROTARY (JOG)	
#2	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT	

7-3. MECHANISM DECK SECTION (MG-25L-136)



Ref. No.	Part No.	Description	Remark
151	A-3315-400-A	FLYWHEEL (HR) ASSY	
* 152	3-019-130-01	LEVER (LDG-A)	
* 153	3-019-131-06	LEVER (LDG-B)	
154	3-228-690-01	SPRING (LD-1), TENSION	
155	3-020-540-01	SPRING (LD-2), TENSION	
156	3-020-542-01	GEAR (LOADING FT)	
157	3-341-753-11	WASHER, POLYETHYLENE	
158	3-020-533-01	HOUSING	
* 159	3-020-532-02	ARM (SUCTION)	
160	3-020-534-01	HANGER	
161	3-933-346-01	CATCHER	
162	3-933-344-24	GUIDE (C)	
163	3-927-100-21	SCREW (+PS 2X10), SPECIAL	
164	3-364-151-01	WASHER	
165	A-3220-811-A	MECHANISM DECK ASSY (MG-25L-136)	
166	3-017-302-01	BELT (25)	
167	3-231-940-01	FLYWHEEL (HF)	
168	3-701-437-21	WASHER	
HP901	1-500-196-31	HEAD, MAGNETIC (PLAYBACK)	
M901	A-3291-665-A	MOTOR ASSY, MAIN (CAPSTAN/REEL)	
#6	7-624-104-04	STOP RING 2.0, TYPE -E	
#7	7-627-553-17	SCREW, PRECISION +P 2X2 TYPE3	

SECTION 7
ELECTRICAL PARTS LIST

DISPLAY

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
		DISPLAY BOARD			
		**********			
	1-780-097-11	CONDUCTIVE BOARD, CONNECTION			
		< CAPACITOR >			
C951	1-135-834-11	CERAMIC CHIP	2.2uF		6.3V
C952	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C953	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C954	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C955	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C956	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C957	1-135-834-11	CERAMIC CHIP	2.2uF		6.3V
C958	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CN901	1-817-158-11	PLUG, CONNECTOR 14P			
		< DIODE >			
D902	8-719-978-33	DIODE	DTZ-TT11-6.8B		
D903	8-719-978-33	DIODE	DTZ-TT11-6.8B		
D904	8-719-978-33	DIODE	DTZ-TT11-6.8B		
D905	8-719-988-61	DIODE	1SS355TE-17		
D906	8-719-978-33	DIODE	DTZ-TT11-6.8B		
D951	8-719-083-60	DIODE	UDZSTE-174.7B		
		< IC >			
IC901	8-759-826-21	IC	LC75874W		
IC905	6-705-374-01	IC	MM3033DULE		
IC951	6-600-321-01	IC	KSM-401Y		
		< LIQUID CRYSTAL DISPLAY >			
LCD901	1-805-456-11	DISPLAY PANEL, LIQUID CRYSTAL			
		< LED >			
LED902	6-500-459-01	DIODE	NSCW505T-ARS (LCD BACK LIGHT)		
LED905	6-500-459-01	DIODE	NSCW505T-ARS (LCD BACK LIGHT)		
LED907	8-719-053-09	DIODE	SML-310VTT86 (ILLUMINATION)		
LED908	8-719-053-09	DIODE	SML-310VTT86 (ILLUMINATION)		
LED909	8-719-053-09	DIODE	SML-310VTT86 (ILLUMINATION)		
LED910	8-719-053-09	DIODE	SML-310VTT86 (ILLUMINATION)		
LED911	8-719-053-09	DIODE	SML-310VTT86 (ILLUMINATION)		
LED912	8-719-053-09	DIODE	SML-310VTT86 (ILLUMINATION)		
LED913	8-719-053-09	DIODE	SML-310VTT86 (ILLUMINATION)		
LED914	8-719-053-09	DIODE	SML-310VTT86 (ILLUMINATION)		
LED915	8-719-053-09	DIODE	SML-310VTT86 (ILLUMINATION)		
LED916	8-719-053-09	DIODE	SML-310VTT86 (ILLUMINATION)		
LED917	8-719-053-09	DIODE	SML-310VTT86 (ILLUMINATION)		
LED918	8-719-053-09	DIODE	SML-310VTT86 (ILLUMINATION)		
LED919	8-719-053-09	DIODE	SML-310VTT86 (ILLUMINATION)		
LED920	8-719-053-09	DIODE	SML-310VTT86 (ILLUMINATION)		
LED921	8-719-053-09	DIODE	SML-310VTT86 (ILLUMINATION)		
LED922	8-719-053-09	DIODE	SML-310VTT86 (ILLUMINATION)		
LED923	8-719-053-09	DIODE	SML-310VTT86 (ILLUMINATION)		
LED924	8-719-053-09	DIODE	SML-310VTT86 (ILLUMINATION)		
LED925	8-719-053-09	DIODE	SML-310VTT86 (ILLUMINATION)		
LED926	8-719-053-09	DIODE	SML-310VTT86 (ILLUMINATION)		
LED927	8-719-053-09	DIODE	SML-310VTT86 (ILLUMINATION)		
		< TRANSISTOR >			
Q501	8-729-901-81	TRANSISTOR	2SC2412K-T-146-R		
		< RESISTOR >			
R901	1-216-819-11	METAL CHIP	680	5%	1/10W
R902	1-216-819-11	METAL CHIP	680	5%	1/10W
R903	1-216-819-11	METAL CHIP	680	5%	1/10W
R904	1-216-821-11	METAL CHIP	1K	5%	1/10W
R905	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R906	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R907	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R908	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R909	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R910	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R911	1-216-819-11	METAL CHIP	680	5%	1/10W
R912	1-216-819-11	METAL CHIP	680	5%	1/10W
R913	1-216-819-11	METAL CHIP	680	5%	1/10W
R914	1-216-821-11	METAL CHIP	1K	5%	1/10W
R915	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R916	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R917	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R918	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R919	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R922	1-216-809-11	METAL CHIP	100	5%	1/10W
R924	1-216-809-11	METAL CHIP	100	5%	1/10W
R925	1-216-817-11	METAL CHIP	470	5%	1/10W
R926	1-216-817-11	METAL CHIP	470	5%	1/10W

Ref. No.	Part No.	Description			Remark
R927	1-216-817-11	METAL CHIP	470	5%	1/10W
R928	1-216-817-11	METAL CHIP	470	5%	1/10W
R940	1-216-833-11	METAL CHIP	10K	5%	1/10W
R941	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R947	1-216-814-11	METAL CHIP	270	5%	1/10W
R951	1-216-815-11	METAL CHIP	330	5%	1/10W
R952	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R953	1-216-821-11	METAL CHIP	1K	5%	1/10W
R954	1-216-821-11	METAL CHIP	1K	5%	1/10W
R955	1-216-821-11	METAL CHIP	1K	5%	1/10W
R956	1-216-821-11	METAL CHIP	1K	5%	1/10W
R957	1-218-731-11	METAL CHIP	43K	0.5%	1/10W
R958	1-216-821-11	METAL CHIP	1K	5%	1/10W
R959	1-216-821-11	METAL CHIP	1K	5%	1/10W
R960	1-216-821-11	METAL CHIP	1K	5%	1/10W
R961	1-216-857-11	METAL CHIP	1M	5%	1/10W
R971	1-216-809-11	METAL CHIP	100	5%	1/10W
R972	1-216-809-11	METAL CHIP	100	5%	1/10W
R973	1-216-809-11	METAL CHIP	100	5%	1/10W
R974	1-216-809-11	METAL CHIP	100	5%	1/10W
R975	1-216-809-11	METAL CHIP	100	5%	1/10W
R976	1-216-809-11	METAL CHIP	100	5%	1/10W
R977	1-216-812-11	METAL CHIP	180	5%	1/10W
R978	1-216-811-11	METAL CHIP	150	5%	1/10W
R979	1-216-812-11	METAL CHIP	180	5%	1/10W
R980	1-216-811-11	METAL CHIP	150	5%	1/10W
R981	1-216-812-11	METAL CHIP	180	5%	1/10W
R982	1-216-811-11	METAL CHIP	150	5%	1/10W
		< ROTARY ENCODER >			
RE901	1-478-474-11	ENCODER, ROTARY (JOG)			
		< SWITCH >			
S901	1-771-884-31	SWITCH, TACTILE (OFF)			
S902	1-771-884-31	SWITCH, TACTILE (DISC/PRESET +)			
S903	1-771-884-31	SWITCH, TACTILE (LIST)			
S904	1-771-884-31	SWITCH, TACTILE (DSO)			
S905	1-771-884-31	SWITCH, TACTILE (EQ3)			
S906	1-771-884-31	SWITCH, TACTILE (⏮ SEEK – ◀◀)			
S907	1-771-884-31	SWITCH, TACTILE (DSPL)			
S908	1-771-884-31	SWITCH, TACTILE (DISC/PRESET –)			
S909	1-771-884-31	SWITCH, TACTILE (▶▶⏭ SEEK + ▶▶)			
S910	1-771-884-31	SWITCH, TACTILE (ATA, 6)			
S911	1-771-884-31	SWITCH, TACTILE (BL SKIP, 5)			
S912	1-771-884-31	SWITCH, TACTILE (SHUF, 4)			
S913	1-771-884-31	SWITCH, TACTILE (REP, 3)			
S914	1-771-884-31	SWITCH, TACTILE (2)			
S915	1-771-884-31	SWITCH, TACTILE (1)			
S916	1-771-884-31	SWITCH, TACTILE (BTM)			
S917	1-771-884-31	SWITCH, TACTILE (MTL, SENS)			
S918	1-771-884-31	SWITCH, TACTILE (MODE ◀II▶)			
S919	1-771-884-31	SWITCH, TACTILE (SOURCE)			

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Ref. No.	Part No.	Description			Remark
	A-3283-618-A	MAIN BOARD, COMPLETE			
		**********			
	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT			
	7-685-793-09	SCREW +PTT 2.6X8 (S)			
	7-685-795-09	SCREW +PTT 2.6X12 (S)			
		< CAPACITOR >			
C12	1-104-665-11	ELECT	100uF	20%	25V
C13	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C14	1-124-589-11	ELECT	47uF	20%	16V
C15	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C19	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C81	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C82	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C85	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C86	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C87	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C101	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C102	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C103	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C104	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C105	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C142	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C143	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C144	1-126-960-11	ELECT	1uF	20%	50V
C201	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C202	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C203	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C204	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C205	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C242	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C243	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C244	1-126-960-11	ELECT	1uF	20%	50V
C301	1-124-234-00	ELECT	22uF	20%	16V
C302	1-124-234-00	ELECT	22uF	20%	16V
C303	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C304	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C305	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C306	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C308	1-124-233-11	ELECT	10uF	20%	16V
C309	1-126-160-11	ELECT	1uF	20%	50V
C310	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C351	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C352	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C353	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C354	1-124-233-11	ELECT	10uF	20%	16V
C356	1-126-934-11	ELECT	220uF	20%	16V
C357	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C358	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C401	1-124-233-11	ELECT	10uF	20%	16V
C402	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C403	1-124-589-11	ELECT	47uF	20%	16V
C411	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C412	1-136-154-00	FILM	0.012uF	5%	50V
C413	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C421	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C422	1-136-154-00	FILM	0.012uF	5%	50V

MAIN

Ref. No.	Part No.	Description			Remark
C423	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C431	1-124-233-11	ELECT	10uF	20%	16V
C432	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C433	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C441	1-124-233-11	ELECT	10uF	20%	16V
C442	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C443	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C444	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C451	1-124-233-11	ELECT	10uF	20%	16V
C452	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C453	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C454	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C461	1-124-233-11	ELECT	10uF	20%	16V
C462	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C463	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C471	1-124-233-11	ELECT	10uF	20%	16V
C479	1-124-589-11	ELECT	47uF	20%	16V
C481	1-124-233-11	ELECT	10uF	20%	16V
C501	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C504	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C505	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C506	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C510	1-124-589-11	ELECT	47uF	20%	16V
C511	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C514	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C515	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C516	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C517	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C518	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C521	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C581	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C582	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C583	1-126-935-11	ELECT	470uF	20%	16V
C601	1-107-885-31	ELECT	3300uF	20%	16V
C602	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
C609	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C617	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C618	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C621	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C622	1-125-710-11	DOUBLE LAYER	0.1F		5.5V
C623	1-124-584-00	ELECT	100uF	20%	10V
C631	1-124-257-00	ELECT	2.2uF	20%	50V
C710	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C711	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C720	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C721	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C751	1-124-234-00	ELECT	22uF	20%	16V
C752	1-124-257-00	ELECT	2.2uF	20%	50V
C753	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C754	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C755	1-124-233-11	ELECT	10uF	20%	16V
C756	1-124-233-11	ELECT	10uF	20%	16V
C757	1-124-233-11	ELECT	10uF	20%	16V
C758	1-124-233-11	ELECT	10uF	20%	16V
C759	1-124-584-00	ELECT	100uF	20%	10V
C762	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C763	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C764	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
C765	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
C766	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C767	1-124-589-11	ELECT	47uF	20%	16V

< CONNECTOR >

CN301	1-785-694-11	CONNECTOR, FFC/FPC 7P
CN351	1-784-490-11	CONNECTOR, FFC/FPC 11P
CN581	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)
CN701	1-784-456-11	CONNECTOR, FFC/FPC 14P
CNP601	1-774-701-21	PIN, CONNECTOR 16P

< DIODE >

D352	8-719-200-82	DIODE	11ES2
D401	8-719-081-97	DIODE	MMDL914T1
D479	8-719-081-97	DIODE	MMDL914T1
D581	8-719-056-82	DIODE	UDZ-TE-17-6.2B
D582	8-719-056-93	DIODE	UDZ-TE-17-18B
D584	8-719-056-93	DIODE	UDZ-TE-17-18B
D585	8-719-072-70	DIODE	MA2ZD14001S0
D586	8-719-056-93	DIODE	UDZ-TE-17-18B
D601	8-719-049-38	DIODE	1N5404TU
D609	8-719-056-83	DIODE	UDZ-TE-17-6.8B
D612	8-719-200-82	DIODE	11ES2
D613	8-719-200-82	DIODE	11ES2
D617	8-719-200-82	DIODE	11ES2
D618	8-719-200-82	DIODE	11ES2
D651	8-719-056-93	DIODE	UDZ-TE-17-18B
D671	8-719-081-97	DIODE	MMDL914T1
D701	8-719-081-97	DIODE	MMDL914T1
D710	8-719-056-83	DIODE	UDZ-TE-17-6.8B
D711	8-719-056-83	DIODE	UDZ-TE-17-6.8B
D713	8-719-056-83	DIODE	UDZ-TE-17-6.8B
D714	8-719-056-93	DIODE	UDZ-TE-17-18B
D715	8-719-056-83	DIODE	UDZ-TE-17-6.8B
D716	8-719-056-83	DIODE	UDZ-TE-17-6.8B
D717	8-719-056-83	DIODE	UDZ-TE-17-6.8B
D718	8-719-056-83	DIODE	UDZ-TE-17-6.8B
D719	8-719-056-93	DIODE	UDZ-TE-17-18B
D720	8-719-056-83	DIODE	UDZ-TE-17-6.8B
D721	8-719-056-83	DIODE	UDZ-TE-17-6.8B
D751	8-719-200-82	DIODE	11ES2
D752	8-719-200-82	DIODE	11ES2
D753	8-719-200-82	DIODE	11ES2
D754	8-719-200-82	DIODE	11ES2
D755	8-719-200-82	DIODE	11ES2
D756	8-719-200-82	DIODE	11ES2
D757	8-719-200-82	DIODE	11ES2
D758	8-719-200-82	DIODE	11ES2

< IC >

IC301	6-703-669-01	IC	HA12231FPEL
IC351	8-759-527-33	IC	LB1930M-TLM-E
IC401	6-705-372-01	IC	BD3808FS-FE2
IC501	6-804-099-01	IC	MN101C49KSS
IC581	8-759-096-16	IC	MM1175XFF
IC602	8-759-682-69	IC	XC61CN4302MR
IC751	6-703-375-01	IC	TDA8588J/N1

MAIN

Ref. No.	Part No.	Description			Remark
		< JACK >			
J10	1-815-185-13	JACK (ANT) (FM/AM ANTENNA IN)			
J331	1-774-699-12	JACK, PIN 4P (AUDIO OUT REAR, BUS AUDIO IN)			
J671	1-566-822-41	JACK (REMOTE IN)			
		< SHORT >			
JC81	1-216-296-11	SHORT CHIP	0		
JC301	1-216-864-11	SHORT CHIP	0		
JC302	1-216-864-11	SHORT CHIP	0		
JC303	1-216-864-11	SHORT CHIP	0		
JC401	1-216-296-11	SHORT CHIP	0		
JC402	1-216-296-11	SHORT CHIP	0		
JC403	1-216-296-11	SHORT CHIP	0		
JC404	1-216-864-11	SHORT CHIP	0		
JC406	1-216-296-11	SHORT CHIP	0		
JC407	1-216-864-11	SHORT CHIP	0		
JC408	1-216-296-11	SHORT CHIP	0		
JC409	1-216-864-11	SHORT CHIP	0		
JC410	1-216-296-11	SHORT CHIP	0		
JC502	1-216-864-11	SHORT CHIP	0		
JC503	1-216-864-11	SHORT CHIP	0		
JC751	1-216-296-11	SHORT CHIP	0		
		< COIL >			
L11	1-469-844-11	INDUCTOR	2.2uH		
L12	1-469-844-11	INDUCTOR	2.2uH		
L500	1-456-617-11	COIL, CHOKE	250uH		
L501	1-410-750-41	INDUCTOR	0.47uH		
		< TRANSISTOR >			
Q301	8-729-010-25	TRANSISTOR	MSD601-RT1		
Q353	8-729-421-22	TRANSISTOR	UN2211		
Q354	8-729-106-60	TRANSISTOR	2SB1115A-YQ		
Q431	6-550-752-01	TRANSISTOR	DTC614TKT146		
Q441	6-550-752-01	TRANSISTOR	DTC614TKT146		
Q451	6-550-752-01	TRANSISTOR	DTC614TKT146		
Q461	6-550-752-01	TRANSISTOR	DTC614TKT146		
Q471	6-550-752-01	TRANSISTOR	DTC614TKT146		
Q478	8-729-421-22	TRANSISTOR	UN2211		
Q479	8-729-424-08	TRANSISTOR	UN2111		
Q481	6-550-752-01	TRANSISTOR	DTC614TKT146		
Q543	8-729-424-08	TRANSISTOR	UN2111		
Q544	8-729-010-25	TRANSISTOR	MSD601-RT1		
Q581	8-729-421-22	TRANSISTOR	UN2211		
Q631	8-729-010-25	TRANSISTOR	MSD601-RT1		
Q641	8-729-047-76	TRANSISTOR	FMC2A-T148		
Q651	8-729-010-25	TRANSISTOR	MSD601-RT1		
Q664	8-729-424-08	TRANSISTOR	UN2111		
		< RESISTOR >			
R11	1-247-807-31	CARBON	100	5%	1/4W
R12	1-247-807-31	CARBON	100	5%	1/4W
R103	1-216-833-11	METAL CHIP	10K	5%	1/10W
R104	1-216-835-11	METAL CHIP	15K	5%	1/10W
R105	1-216-838-11	METAL CHIP	27K	5%	1/10W

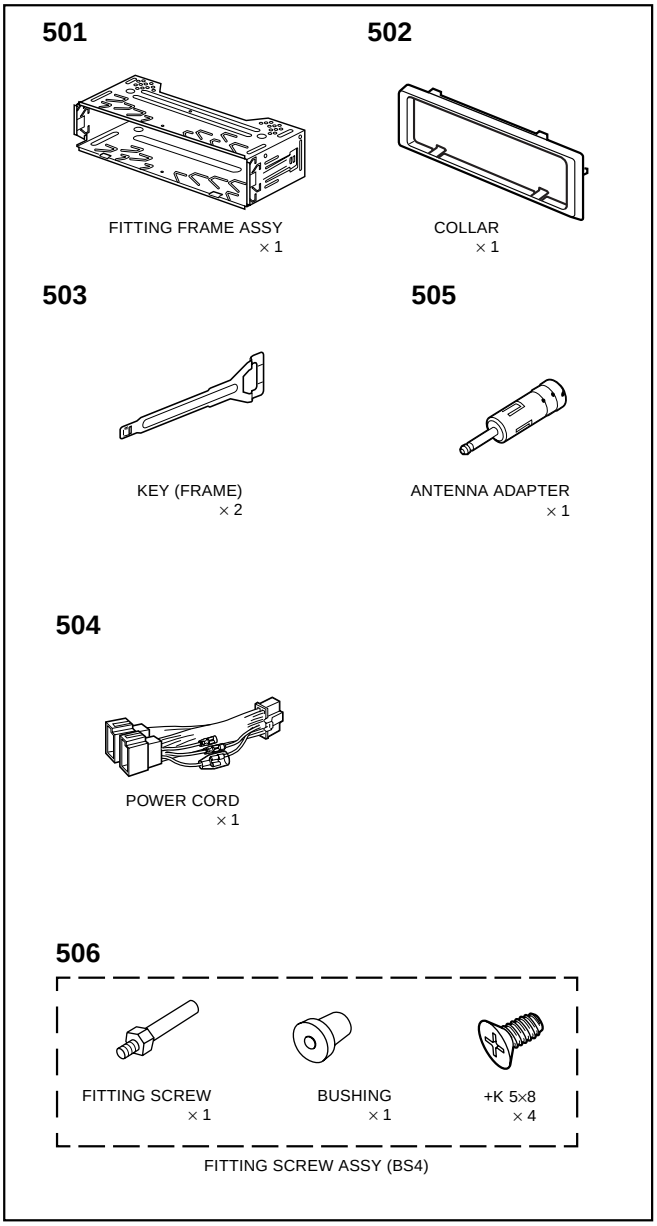
Ref. No.	Part No.	Description			Remark
R141	1-216-833-11	METAL CHIP	10K	5%	1/10W
R142	1-216-821-11	METAL CHIP	1K	5%	1/10W
R203	1-216-833-11	METAL CHIP	10K	5%	1/10W
R204	1-216-835-11	METAL CHIP	15K	5%	1/10W
R205	1-216-838-11	METAL CHIP	27K	5%	1/10W
R241	1-216-833-11	METAL CHIP	10K	5%	1/10W
R242	1-216-821-11	METAL CHIP	1K	5%	1/10W
R301	1-216-851-11	METAL CHIP	330K	5%	1/10W
R302	1-216-835-11	METAL CHIP	15K	5%	1/10W
R303	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R304	1-249-393-11	CARBON	10	5%	1/4W
R352	1-249-383-11	CARBON	1.5	5%	1/4W
R353	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R354	1-216-833-11	METAL CHIP	10K	5%	1/10W
R401	1-216-838-11	METAL CHIP	27K	5%	1/10W
R402	1-216-809-11	METAL CHIP	100	5%	1/10W
R403	1-216-809-11	METAL CHIP	100	5%	1/10W
R404	1-249-393-11	CARBON	10	5%	1/4W
R411	1-216-833-11	METAL CHIP	10K	5%	1/10W
R412	1-216-833-11	METAL CHIP	10K	5%	1/10W
R421	1-216-833-11	METAL CHIP	10K	5%	1/10W
R422	1-216-833-11	METAL CHIP	10K	5%	1/10W
R431	1-216-813-11	METAL CHIP	220	5%	1/10W
R432	1-216-864-11	SHORT CHIP	0		
R433	1-216-841-11	METAL CHIP	47K	5%	1/10W
R434	1-216-821-11	METAL CHIP	1K	5%	1/10W
R441	1-216-813-11	METAL CHIP	220	5%	1/10W
R442	1-216-864-11	SHORT CHIP	0		
R443	1-216-841-11	METAL CHIP	47K	5%	1/10W
R444	1-216-821-11	METAL CHIP	1K	5%	1/10W
R451	1-216-813-11	METAL CHIP	220	5%	1/10W
R452	1-216-864-11	SHORT CHIP	0		
R453	1-216-841-11	METAL CHIP	47K	5%	1/10W
R454	1-216-821-11	METAL CHIP	1K	5%	1/10W
R461	1-216-813-11	METAL CHIP	220	5%	1/10W
R462	1-216-864-11	SHORT CHIP	0		
R463	1-216-841-11	METAL CHIP	47K	5%	1/10W
R464	1-216-821-11	METAL CHIP	1K	5%	1/10W
R472	1-216-813-11	METAL CHIP	220	5%	1/10W
R473	1-216-841-11	METAL CHIP	47K	5%	1/10W
R479	1-216-805-11	METAL CHIP	47	5%	1/10W
R482	1-216-813-11	METAL CHIP	220	5%	1/10W
R483	1-216-841-11	METAL CHIP	47K	5%	1/10W
R501	1-216-837-11	METAL CHIP	22K	5%	1/10W
R502	1-216-813-11	METAL CHIP	220	5%	1/10W
R503	1-216-845-11	METAL CHIP	100K	5%	1/10W
R504	1-216-809-11	METAL CHIP	100	5%	1/10W
R505	1-216-809-11	METAL CHIP	100	5%	1/10W
R506	1-216-809-11	METAL CHIP	100	5%	1/10W
R507	1-216-841-11	METAL CHIP	47K	5%	1/10W
R508	1-216-845-11	METAL CHIP	100K	5%	1/10W
R516	1-216-845-11	METAL CHIP	100K	5%	1/10W
R518	1-216-845-11	METAL CHIP	100K	5%	1/10W
R519	1-216-845-11	METAL CHIP	100K	5%	1/10W
R520	1-216-841-11	METAL CHIP	47K	5%	1/10W
R521	1-216-837-11	METAL CHIP	22K	5%	1/10W
R522	1-216-837-11	METAL CHIP	22K	5%	1/10W
R523	1-216-837-11	METAL CHIP	22K	5%	1/10W

MAIN **SUB**

Ref. No.	Part No.	Description			Remark
R524	1-249-441-11	CARBON	100K	5%	1/4W
R526	1-216-845-11	METAL CHIP	100K	5%	1/10W
R527	1-216-864-11	SHORT CHIP	0		
R528	1-216-845-11	METAL CHIP	100K	5%	1/10W
R529	1-216-833-11	METAL CHIP	10K	5%	1/10W
R530	1-216-833-11	METAL CHIP	10K	5%	1/10W
R531	1-216-845-11	METAL CHIP	100K	5%	1/10W
R532	1-216-841-11	METAL CHIP	47K	5%	1/10W
R537	1-216-845-11	METAL CHIP	100K	5%	1/10W
R538	1-216-845-11	METAL CHIP	100K	5%	1/10W
R539	1-216-845-11	METAL CHIP	100K	5%	1/10W
R540	1-216-845-11	METAL CHIP	100K	5%	1/10W
R541	1-216-845-11	METAL CHIP	100K	5%	1/10W
R542	1-216-845-11	METAL CHIP	100K	5%	1/10W
R543	1-216-845-11	METAL CHIP	100K	5%	1/10W
R544	1-216-841-11	METAL CHIP	47K	5%	1/10W
R545	1-216-833-11	METAL CHIP	10K	5%	1/10W
R546	1-216-864-11	SHORT CHIP	0		
R547	1-216-864-11	SHORT CHIP	0		
R550	1-216-833-11	METAL CHIP	10K	5%	1/10W
R551	1-216-864-11	SHORT CHIP	0		
R552	1-216-845-11	METAL CHIP	100K	5%	1/10W
R553	1-216-845-11	METAL CHIP	100K	5%	1/10W
R554	1-249-433-11	CARBON	22K	5%	1/4W
R558	1-216-864-11	SHORT CHIP	0		
R559	1-216-833-11	METAL CHIP	10K	5%	1/10W
R560	1-216-833-11	METAL CHIP	10K	5%	1/10W
R581	1-249-431-11	CARBON	15K	5%	1/4W
R582	1-249-417-11	CARBON	1K	5%	1/4W
R583	1-216-809-11	METAL CHIP	100	5%	1/10W
R584	1-216-809-11	METAL CHIP	100	5%	1/10W
R586	1-216-864-11	SHORT CHIP	0		
R609	1-249-417-11	CARBON	1K	5%	1/4W
R621	1-216-845-11	METAL CHIP	100K	5%	1/10W
R631	1-249-425-11	CARBON	4.7K	5%	1/4W
R632	1-216-841-11	METAL CHIP	47K	5%	1/10W
R633	1-216-841-11	METAL CHIP	47K	5%	1/10W
R634	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R636	1-216-845-11	METAL CHIP	100K	5%	1/10W
R641	1-249-417-11	CARBON	1K	5%	1/4W
R642	1-249-417-11	CARBON	1K	5%	1/4W
R651	1-249-417-11	CARBON	1K	5%	1/4W
R652	1-216-841-11	METAL CHIP	47K	5%	1/10W
R653	1-216-833-11	METAL CHIP	10K	5%	1/10W
R654	1-216-833-11	METAL CHIP	10K	5%	1/10W
R671	1-216-809-11	METAL CHIP	100	5%	1/10W
R672	1-247-807-31	CARBON	100	5%	1/4W
R673	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R674	1-216-849-11	METAL CHIP	220K	5%	1/10W
R701	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R702	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R710	1-216-809-11	METAL CHIP	100	5%	1/10W
R711	1-216-809-11	METAL CHIP	100	5%	1/10W
R713	1-216-809-11	METAL CHIP	100	5%	1/10W
R715	1-247-807-31	CARBON	100	5%	1/4W
R723	1-216-809-11	METAL CHIP	100	5%	1/10W
R724	1-216-809-11	METAL CHIP	100	5%	1/10W

Ref. No.	Part No.	Description			Remark
R751	1-216-841-11	METAL CHIP	47K	5%	1/10W
R752	1-216-809-11	METAL CHIP	100	5%	1/10W
		< SWITCH >			
S502	1-786-458-11	SWITCH, PUSH (1 KEY) (NOSE DETECT)			
S702	1-692-431-21	SWITCH, TACTILE (RESET)			
		< THERMISTOR >			
TH501	1-803-350-21	THERMISTOR, POSITIVE			
		< TUNER UNIT >			
TU1	A-3220-961-A	TUNER UNIT (TUX-032//Q3)			
		< VIBRATOR >			
X501	1-795-165-11	VIBRATOR, CERAMIC (18.43MHz)			
X502	1-813-202-11	VIBRATOR, CRYSTAL (32.768kHz)			
**********					
		SUB BOARD			
		**********			
	1-792-195-11	CABLE, FLEXIBLE FLAT (14 CORE)			
		< CONNECTOR >			
CNP801	1-817-159-11	SOCKET, CONNECTOR 14P			
		< SWITCH >			
LSW801	1-771-883-31	SWITCH, TACTILE (WITH LED) (⏏)			
**********					
		MISCELLANEOUS			
		**********			
3	1-792-195-11	CABLE, FLEXIBLE FLAT (14 CORE)			
14	1-776-527-61	CORD (WITH CONNECTOR) (ISO) (POWER)			
54	1-780-097-11	CONDUCTIVE BOARD, CONNECTION			
165	A-3220-811-A	MECHANISM DECK ASSY (MG-25L-136)			
CN901	1-817-158-11	PLUG, CONNECTOR 14P			
F781	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A/32V)			
HP901	1-500-196-31	HEAD, MAGNETIC (PLAYBACK)			
LCD901	1-805-456-11	DISPLAY PANEL, LIQUID CRYSTAL			
M901	A-3291-665-A	MOTOR ASSY, MAIN (CAPSTAN/REEL)			
RE901	1-478-474-11	ENCODER, ROTARY (JOG)			
TU1	A-3220-961-A	TUNER UNIT (TUX-032//Q3)			
**********					
		ACCESSORIES			
		**********			
	1-476-526-34	REMOTE COMMANDER (RM-X115)			
	3-230-047-01	LID, BATTERY CASE (for RM-X115)			
	3-262-935-41	MANUAL, INSTRUCTION INSTALL (ENGLISH, RUSSIAN)			
	3-262-940-41	MANUAL, INSTRUCTION (ENGLISH, RUSSIAN)			
**********					

Ref. No.	Part No.	Description	Remark
		PARTS FOR INSTALLATION AND CONNECTIONS	
		**********	
501	X-3382-647-1	FRAME ASSY, FITTING	
502	3-261-758-01	COLLAR	
503	3-246-471-01	KEY (FRAME)	
504	1-776-527-61	CORD (WITH CONNECTOR) (ISO) (POWER)	
505	1-465-459-31	ADAPTER, ANTENNA	
506	X-3381-154-1	SCREW ASSY (BS4), FITTING	



REVISION HISTORY

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Ver.	Date	Description of Revision
1.0	2004.04	New